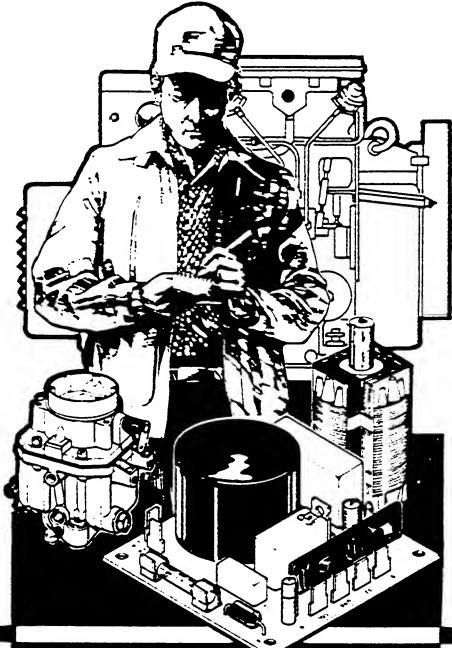

Onan

**Parts
Manual
DL6
GenSet**



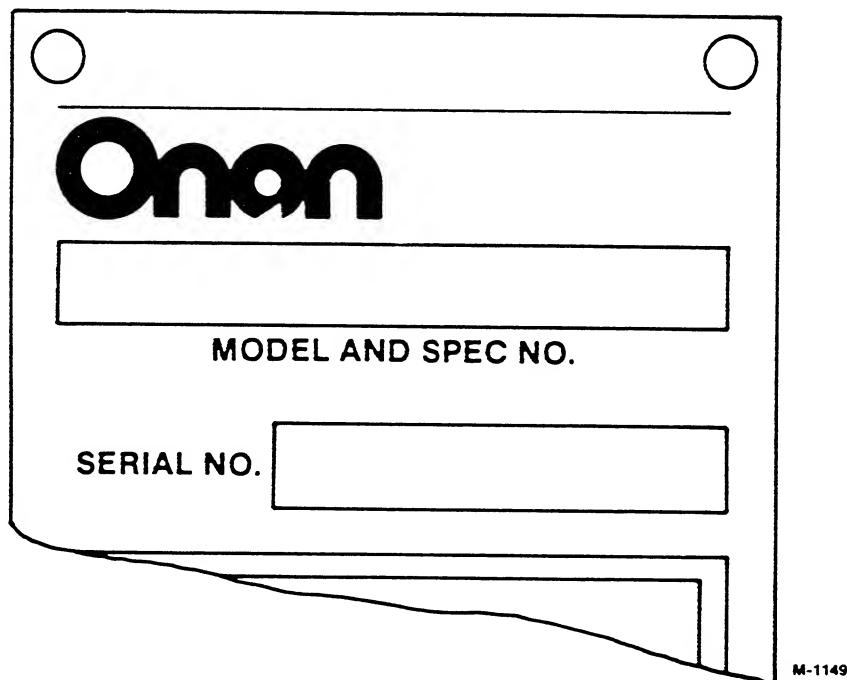
Onan Service Parts

**934-0231
3-89 (SPEC C-E)
Replaces 6-88 (Spec C-E)
Printed in U.S.A**

General Information

For parts or service, contact the dealer from whom you purchased this equipment or refer to your Nearest Authorized Onan Parts and Service Center.

To avoid errors or delay in filling your parts order, always give the MODEL, SPEC NO. and SERIAL NO. from the Onan nameplate.



For handy reference, insert "YOUR"
nameplate information in the spaces above.

Important Safety Precautions

Read and observe these safety precautions when using or working on electric generators, engines and related equipment. Also read and follow the literature provided with the equipment.

Proper operation and maintenance are critical to performance and safety. Electricity, fuel, exhaust, moving parts and batteries present hazards that can cause severe personal injury or death.

FUEL, ENGINE OIL, AND FUMES ARE FLAMMABLE AND TOXIC

Fire, explosion, and personal injury can result from improper practices.

- Used engine oil, and benzene and lead, found in some gasoline, have been identified by government agencies as causing cancer or reproductive toxicity. When checking, draining or adding fuel or oil, do not ingest, breathe the fumes, or contact gasoline or used oil.
- Do not fill tanks with engine running. Do not smoke around the area. Wipe up oil or fuel spills. Do not leave rags in engine compartment or on equipment. Keep this and surrounding area clean.
- Inspect fuel system before each operation and periodically while running.
- Equip fuel supply with a positive fuel shutoff.
- Do not store or transport equipment with fuel in tank.
- Keep an ABC-rated fire extinguisher available near equipment and adjacent areas for use on all types of fires except alcohol.
- Unless provided with equipment or noted otherwise in installation manual, fuel lines must be copper or steel, secured, free of leaks and separated or shielded from electrical wiring.
- Use approved, non-conductive flexible fuel hose for fuel connections. Do not use copper tubing as a flexible connection. It will work-harden and break.

EXHAUST GAS IS DEADLY

- Engine exhaust contains carbon monoxide (CO), an odorless, invisible, poisonous gas. Learn the symptoms of CO poisoning.
- Never sleep in a vessel, vehicle, or room with a genset or engine running unless the area is equipped with an operating CO detector with an audible alarm.
- Each time the engine or genset is started, or at least every day, thoroughly inspect the exhaust system. Shut down the unit and repair leaks immediately.

- Warning: Engine exhaust is known to the State of California to cause cancer, birth defects and other reproductive harm.

Make sure exhaust is properly ventilated.

- Vessel bilge must have an operating power exhaust.
- Vehicle exhaust system must extend beyond vehicle perimeter and not near windows, doors or vents.
- Do not use engine or genset cooling air to heat an area.
- Do not operate engine/genset in enclosed area without ample fresh air ventilation.
- Expel exhaust away from enclosed, sheltered, or occupied areas.
- Make sure exhaust system components are securely fastened and not warped.

MOVING PARTS CAN CAUSE SEVERE PERSONAL INJURY OR DEATH

- Do not remove any guards or covers with the equipment running.
- Keep hands, clothing, hair, and jewelry away from moving parts.
- Before performing any maintenance, disconnect battery (negative [-] cable first) to prevent accidental starting.
- Make sure fasteners and joints are secure. Tighten supports and clamps, keep guards in position over fans, drive belts, etc.
- If adjustments must be made while equipment is running, use extreme caution around hot manifolds and moving parts, etc. Wear safety glasses and protective clothing.

BATTERY GAS IS EXPLOSIVE

- Wear safety glasses and do not smoke while servicing batteries.
- Always disconnect battery negative (-) lead first and reconnect it last. Make sure you connect battery correctly. A direct short across battery terminals can cause an explosion. Do not smoke while servicing batteries. Hydrogen gas given off during charging is explosive.
- Do not disconnect or connect battery cables if fuel vapors are present. Ventilate the area thoroughly.

DO NOT OPERATE IN FLAMMABLE AND EXPLOSIVE ENVIRONMENTS

Flammable vapor can be ignited by equipment operation or cause a diesel engine to overspeed and become difficult to stop, resulting in possible fire, explosion, severe personal injury and death. **Do not operate diesel equipment where a flammable vapor environment can be created by fuel spill, leak, etc., unless equipped with an automatic safety device to block the air intake and stop the engine.**

HOT COOLANT CAN CAUSE SEVERE PERSONAL INJURY

- Hot coolant is under pressure. Do not loosen the coolant pressure cap while the engine is hot. Let the engine cool before opening the pressure cap.

ELECTRICAL SHOCK CAN CAUSE SEVERE PERSONAL INJURY OR DEATH

- Do not service control panel or engine with unit running. High voltages are present. Work that must be done while unit is running should be done only by qualified service personnel.
- Do not connect the generator set to the public utility or to any other electrical power system. Electrocution can occur at a remote site where line or equipment repairs are being made. An approved transfer switch must be used if more than one power source is connected.
- Disconnect starting battery (negative [-] cable first) before removing protective shields or touching electrical equipment. Use insulative mats placed on dry wood platforms. Do not wear jewelry, damp clothing or allow skin surface to be damp when handling electrical equipment.
- Use insulated tools. Do not tamper with interlocks.
- Follow all applicable state and local electrical codes. Have all electrical installations performed by a qualified licensed electrician. Tag open switches to avoid accidental closure.
- With transfer switches, keep cabinet closed and locked. Only authorized personnel should have cabinet or operational keys. Due to serious shock hazard from high voltages within cabinet, all service and adjustments must be performed by an electrician or authorized service representative.

If the cabinet must be opened for any reason:

1. Move genset operation switch or Stop/Auto/Handcrank switch (whichever applies) to Stop.
2. Disconnect genset batteries (negative [-] lead first).
3. Remove AC power to automatic transfer switch. If instructions require otherwise, use extreme caution due to shock hazard.

MEDIUM VOLTAGE GENERATOR SETS (601V TO 15kV)

- Medium voltage acts differently than low voltage. Special equipment and training are required to work on or around medium voltage equipment. Operation and maintenance must be done only by persons trained and qualified to work on such devices. Improper use or procedures will result in severe personal injury or death.
- Do not work on energized equipment. Unauthorized personnel must not be permitted near energized equipment. Induced voltage remains even after equipment is disconnected from the power source. Plan maintenance with authorized personnel so equipment can be de-energized and safely grounded.

GENERAL SAFETY PRECAUTIONS

- Do not work on equipment when mentally or physically fatigued or after consuming alcohol or drugs.
- Carefully follow all applicable local, state and federal codes.
- Never step on equipment (as when entering or leaving the engine compartment). It can stress and break unit components, possibly resulting in dangerous operating conditions from leaking fuel, leaking exhaust fumes, etc.
- Keep equipment and area clean. Oil, grease, dirt, or stowed gear can cause fire or damage equipment by restricting airflow.
- Equipment owners and operators are solely responsible for operating equipment safely. Contact your authorized Onan/Cummins dealer or distributor for more information.

KEEP THIS DOCUMENT NEAR EQUIPMENT FOR EASY REFERENCE.

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Introduction

This parts manual applies to the standard generator sets as listed below. Parts are arranged in groups of related items and each illustrated part is identified by a reference number corresponding to the same reference number in the parts list. Unless otherwise mentioned in the description or page heading, parts are interchangeable between models. All references in the parts description or page heading that pertain to specification letter differences for replacement parts are for the model listed on the identification label affixed to the generator set control. Throughout this manual left (non-accessory) and right (accessory) sides are determined by facing the rear or generator end of the set.

Generator Set Data Table

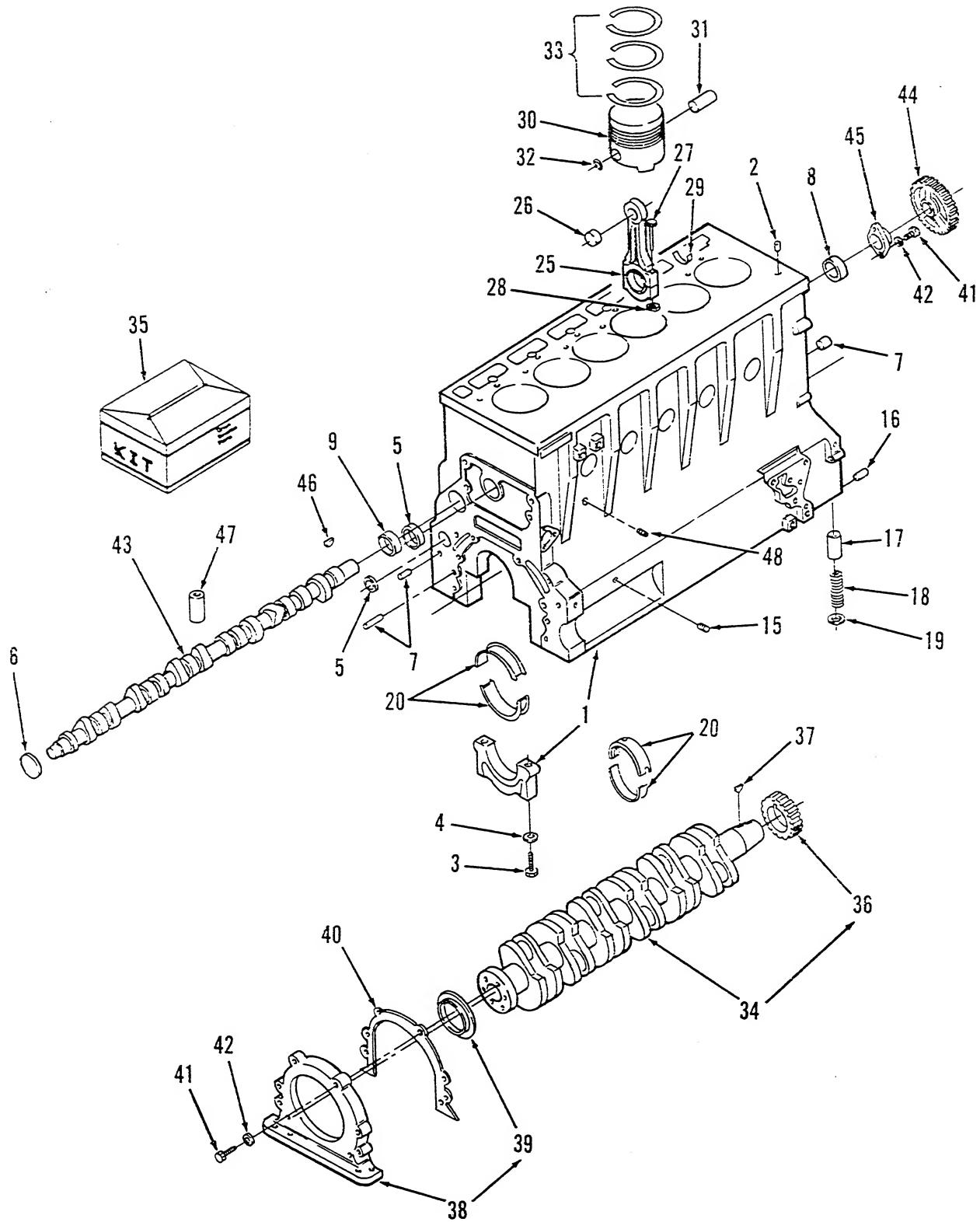
MODEL IDENTIFICATION	RATING	MODEL IDENTIFICATION	RATING
20.0 DL6-*/#@	20,000 WATTS	25.0 DL6-*/#@	25,000 WATTS
30.0 DL6-*/#@	30,000 WATTS		

Electrical Data Table

*VOLTAGE CODES	VOLTS	HERTZ	WIRE	PHASE	NOTES
(3AR)	100/200	60	4	1	+
B (3R)	120/240	60	4	1	
(7R)	220/380	60	4	3	
(9XR)	347/600	60	4	3	
L (15R)	120/208	60	12	3	+
	120/240				
	127/220				
	139/240				
	240/416				
	254/440				
	277/480				
(53R)	120/240	50	4	1	
(515R)	110/190	50	12	3	+
	110/220				
	115/200				
	115/230				
	120/208				
	127/220				
	220/380				
	230/400				
	240/416				
	254/440				

- * - Voltage codes follow model letter designations. A letter is now used in the model to indicate the voltage codes and replaces the corresponding number and letter designations (in brackets) as listed in the Electrical Data Table column. (Example: 30.0 DL6-L/ was formerly 30.0 DL6-15R/) The letter designation is used beginning with Spec E models.
- # - Specification number: Number 1 is standard, all others indicate variations.
- @ - Specification letter: Letter advances (C to D, D to E, etc.) with major manufacturing changes.
- + - These generators are reconnectable, refer to Operator's Manual for wiring data.

Cylinder Block

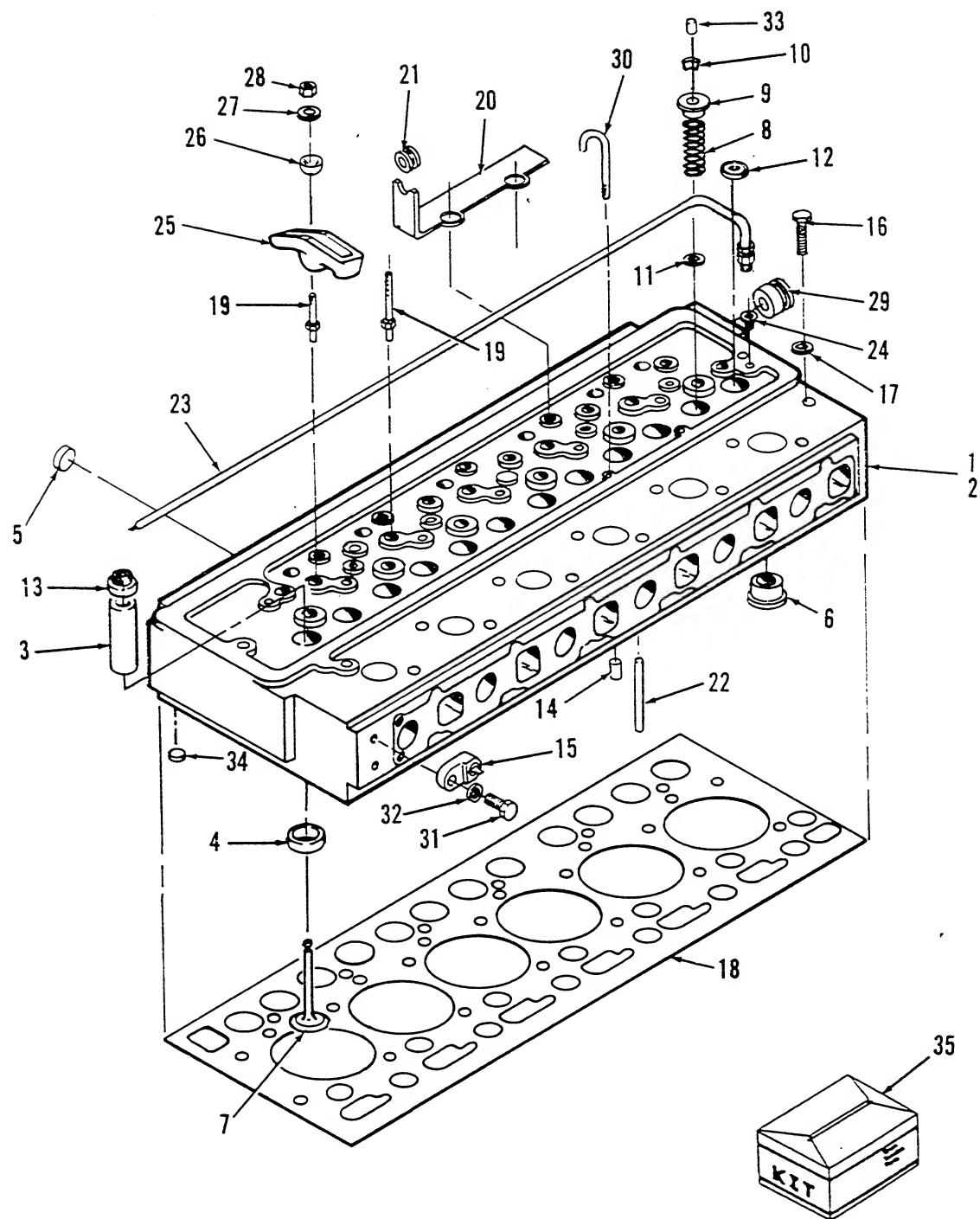


Cylinder Block

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	110-3292	1	Block Assembly, Cylinder (Includes Parts Marked *)	26	114-0316	6	Bushing, Connecting Rod (Semi-Finished)
2	110-2978	2	*Pin, Cylinder Head Alignment	27	114-0315	12	Bolt, Connecting Rod
3	720-1801	14	*Screw, Cap - Hex Head - Special	28	114-0318	12	Nut, Connecting Rod
4	740-1801	14	*Washer, Flat - Special	29			Bearing, Connecting Rod
5			Plug, Cup	114-0319	12		(Half)
	517-0141	6	* 50.8 MM Stainless Steel	114-0319-01	12	Standard	
	517-0144	2	* 12.7 MM Steel	114-0319-02	12	0.25 MM Undersize	
	517-0146	1	* 31.75 MM Stainless Steel	114-0319-03	12	0.50 MM Undersize	
	517-0250	1	54.37 MM Stainless Steel (Oversize)	30			0.75 MM Undersize
6	517-0140	1	*Plug, Welch (57.15 MM) Steel	112-0201	6	Piston And Pin Kit (Includes Retaining Rings)	
7			Pin, Alignment	112-0202	6	Standard	
	775-0074	2	* 8 MM x 20 MM	112-0203	6	0.25 MM Oversize	
	775-0089	2	* 10 MM x 20 MM	112-0204	6	0.50 MM Oversize	
	775-0078	2	* 8 MM x 40 MM	112-0205	6	0.75 MM Oversize	
8	101-0511	1	*Bearing, Camshaft - Front	31	112-0165	6	1.0 MM Oversize
9	101-0471	6	*Bearing, Camshaft - Intermediate and Rear	32	518-0409	12	Pin, Piston
15	505-0274	6	*Plug, Pipe - Steel (1/8")	33	113-0233	6	Ring, Retaining - Piston Pin
16	516-2102	1	*Pin, Regulator Valve Spring	113-0234	6	Ring Kit, Piston	
17	123-1514	1	*Piston, Regulator Valve	113-0235	6	Standard	
18	123-1511	1	*Spring, Regulator Valve	113-0236	6	0.25 MM Oversize	
19	740-1004	1	*Washer, Flat (M6)	113-0237	6	0.50 MM Oversize	
20			Bearing Kit, Main (Includes Upper and Lower Bearing Half)	34	104-1576	1	0.75 MM Oversize
			Front	35	168-0173	1	1.0 MM Oversize
101-0689	1		Standard	36	104-1138	1	Crankshaft and Gear (Includes Key)
101-0690	1		0.25 MM Undersize	37	515-0245	1	Kit, Gasket - Lower End
101-0691	1		0.50 MM Undersize	38	101-0713	1	Gear, Crankshaft
101-0692	1		0.75 MM Undersize	39	509-0203	1	Key - Crankshaft Gear
			Center	40	101-0600	1	Plate, Rear Seal (Includes Seal)
101-0681	1		Standard	41	718-1037	8	Seal, Oil - Rear (Includes Wear Sleeve)
101-0682	1		0.25 MM Undersize	42	740-1006	8	Gasket, Rear Seal Plate
101-0683	1		0.50 MM Undersize	43	105-0512	1	Screw, Cap - Hex Head (M8 x 25 MM)
101-0684	1		0.75 MM Undersize	44	105-0515	1	Washer, Flat (M8)
			Intermediate (Except Center)	45	105-0534	1	Camshaft
101-0685	4		Standard	46	515-0245	1	Gear, Camshaft
101-0686	4		0.25 MM Undersize	47	115-0275	12	Retainer, Camshaft
101-0687	4		0.50 MM Undersize	48	504-0028	1	Key - Camshaft Gear
101-0688	4		0.75 MM Undersize				Tappet
			Rear				Valve, Coolant Drain (3/8")
101-0677	1		Standard				Spec C
101-0678	1		0.25 MM Undersize				
101-0679	1		0.50 MM Undersize				
101-0680	1		0.75 MM Undersize				
25	114-0313	6	Rod, Connecting (Includes Finished Bearing, Bolts and Nuts)				

* - Parts Included in 110-3292 Cylinder
Block Assembly

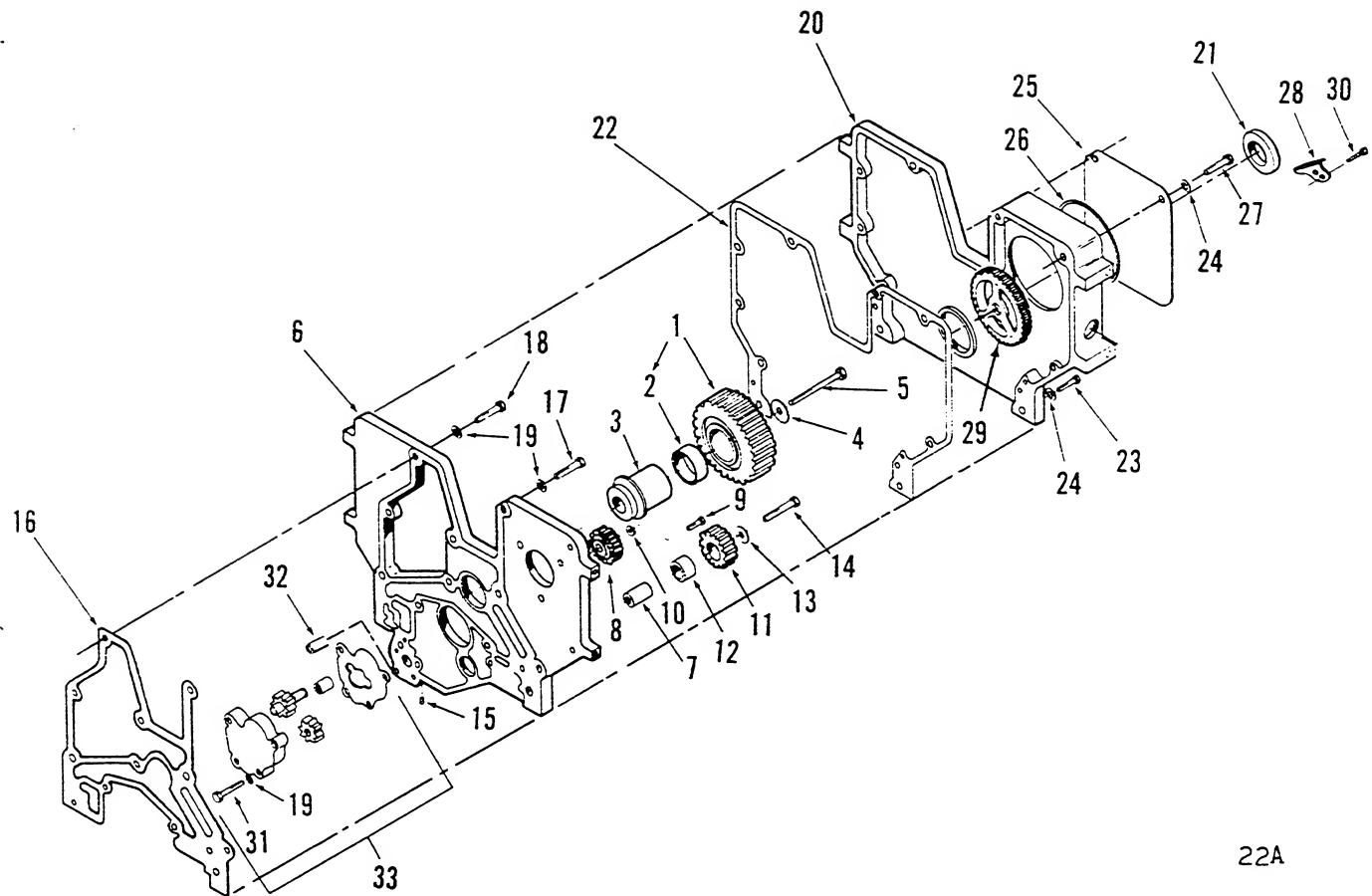
Cylinder Head



Cylinder Head

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	110-3200	1	Head Assembly, Cylinder (Includes Guides, Seats, Cup Plugs, Breather Tubes, Valves, Springs, Water Pump Adapter, Retainers, Collets, Wear Plates, Sleeves, Seals and Spacers)	11	110-2991	12	Plate, Valve Spring Wear Spec C
					110-2991	6	Begin Spec D (Exhaust)
2	110-3284	1	Head, Cylinder (Includes Water Pump Adapter, Seats, Spacers, Sleeves, Cup Plugs and Guides)	12	110-3432	6	Spacer, Valve Spring (Intake) Begin Spec D
3	110-3495	6	Guide, Valve (Semi-Finished) Intake (Standard)	13	110-3228	12	Seal Assembly, Valve Stem
	110-3496	6	Exhaust (Standard)	14	110-2979	6	Sleeve, Sealing
4			Seat, Valve	15	309-0269	1	Switch, Low Engine Temperature (S4) Controls With 9 or 12 Indicator Lights
			Intake (Not Original Equipment)	16	720-1802	26	Screw, Cap - Hex Head (M12 x 130 MM)
	110-2839	6	Spec C	17	740-1801	20	Washer, Flat (M12)
			Begin Spec D	18	110-3026	1	Gasket, Cylinder Head
	110-3226-01	6	Standard	19	115-0204	6	Stud, Rocker Arm
	110-3226-02	6	.25 MM Oversize		115-0270	6	Short
	110-3226-03	6	.50 MM Oversize		115-0313	3	Long
			Exhaust	20	508-0228	3	Guide, Push Rod
	110-2781-01	6	Standard	21	115-0253	12	Grommet
	110-2781-02	6	.25 MM Oversize	22	120-0920	1	Pushrod
	110-2781-03	6	.50 MM Oversize	23	502-0003	1	Tube, Rocker Arm Oil
5			Plug, Cup	24	115-0316	12	Connector, Inverted Male
	517-0142	11	38.1 MM	25	115-0202	12	Arm, Rocker
	517-0146	4	31.75 MM	26	526-2119	12	Ball, Rocker Arm
	517-0162	6	19.05 MM	27	115-0315	12	Washer, Flat
6	110-3137	6	Plug, Hot (Swirl)	28	110-3045	1	Locknut, Rocker Arm
7			Valve	29	110-3490	1	Adapter, Water Pump
	110-3066	6	Intake	30	123-1536	1	Standard
	110-2840	6	Exhaust	31	800-2085	1	0.5 MM Oversize
8	110-3300	12	Spring, Valve	32	740-1008	1	Tube, Breather
9	110-3015	12	Retainer, Valve Spring	33	110-3245	12	Screw, Cap - Hex Head
10	110-2752	24	Collet, Valve Lock	34	517-0167	1	(M10 x 20 MM)
				35	168-0160	1	Washer, Flat (M10)
							Cap, Valve Stem
							Plug, Cup (22.6 MM)
							Kit, Gasket - Valve Grind

Gearcase

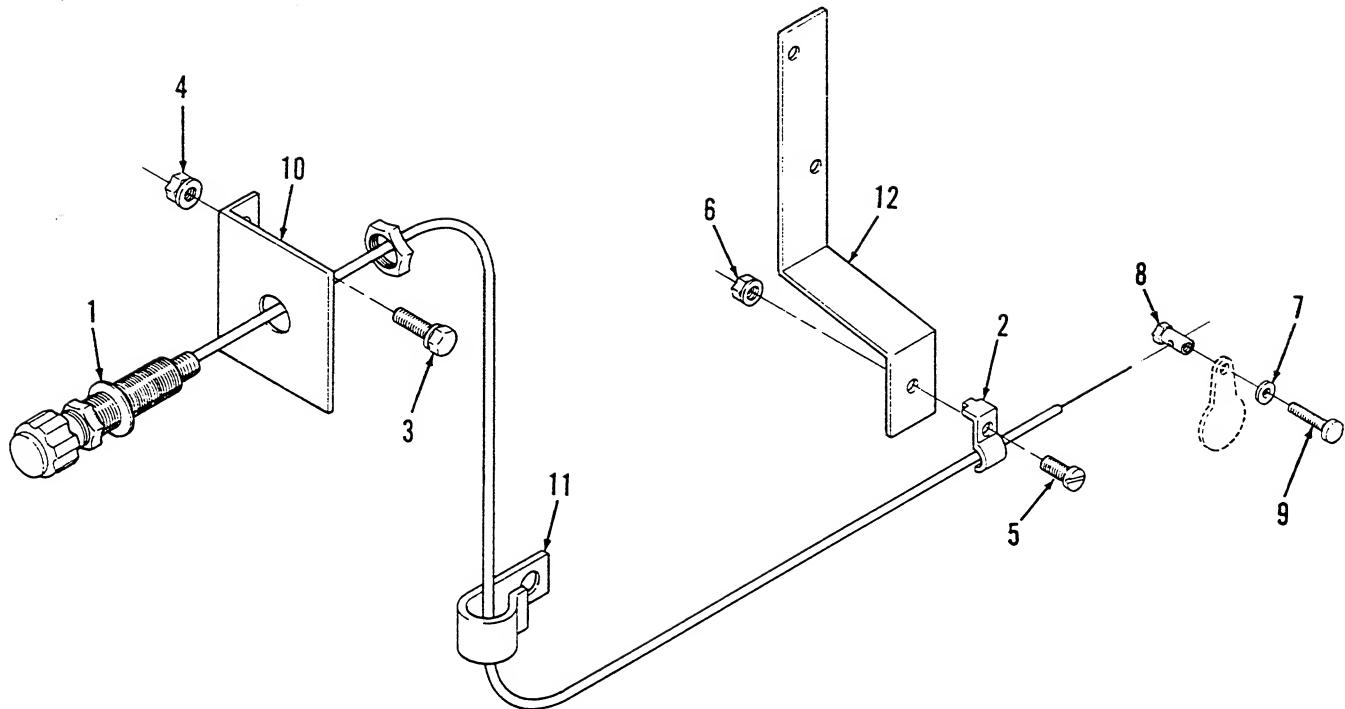


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Gearcase

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	105-0513	1	Gear, Idler (Includes Finished Bearing)	19	740-1006	7	Washer, Flat (M8)
2	105-0519	1	Bearing, Idler Gear (Semi-Finished)	20	103-0746	1	Gearcase (Includes Oil Seal and Oil Fill Tube)
3	105-0508	1	Shaft, Idler Gear	21	509-0191	1	Seal, Oil (Includes Wear Sleeve)
4	526-2127	1	Washer, Flat (M10)	22	103-0731	1	Gasket, Gearcase
5	718-1064	1	Screw, Cap - Hex Head (M10 x 75 MM)	23	718-1046	2	Screw, Cap - Hex Head M8 x 70 MM
6	103-0716	1	Backplate, Gearcase	718-1043	5	M8 x 55 MM	
7	120-0983	1	Shaft, Oil Pump Idler Gear	24	740-1006	4	Washer, Flat
8	120-0885	1	Gear, Oil Pump Drive	740-1010	4	M8	
9	718-1035	1	Screw, Cap - Hex Head (M8 x 16 MM)	25	103-0735	1	M12
10	526-2106	1	Washer, Flat	26	509-0263	1	Cover, Injection Pump Gear
11	120-1063	1	Gear, Oil Pump Idler (Includes Finished Bearing)	27	718-1048	1	Seal, O-Ring
12	120-1041	1	Bearing, Oil Pump Idler Gear (Semi-Finished)	718-1044	2	Screw, Cap - Hex Head	
13	526-2107	1	Washer, Flat	718-1036	1	M8 x 80 MM	
14	718-1035	1	Screw, Cap - Hex Head (M8 x 16 MM)	28	103-0750	1	M8 x 60 MM
15	725-1802	1	Screw, Hex Socket Set (M16 x 16 MM)	29	147-0427	1	M8 x 20 MM
16	103-0733	1	Gasket, Gearcase Backplate	30	815-0578	2	Plate, Timing
17	718-1037	1	Screw, Cap - Hex Head	31	718-1043	2	Gear, Injection Pump
	718-1039	1	M8 x 25 MM	32	120-0979	1	Screw, Cap - Hex Head
	718-1039	1	M8 x 35 MM	33	120-1014	1	(M6 x 12.5 MM)
18	725-1801	2	Screw, Low Socket Head Cap (M8 x 16 MM)				Screw, Cap - Hex Head (M8 x 55 MM)
							Bearing, Oil Pump Drive Shaft
							Pump Kit, Oil (Includes Drive Shaft Bearing)

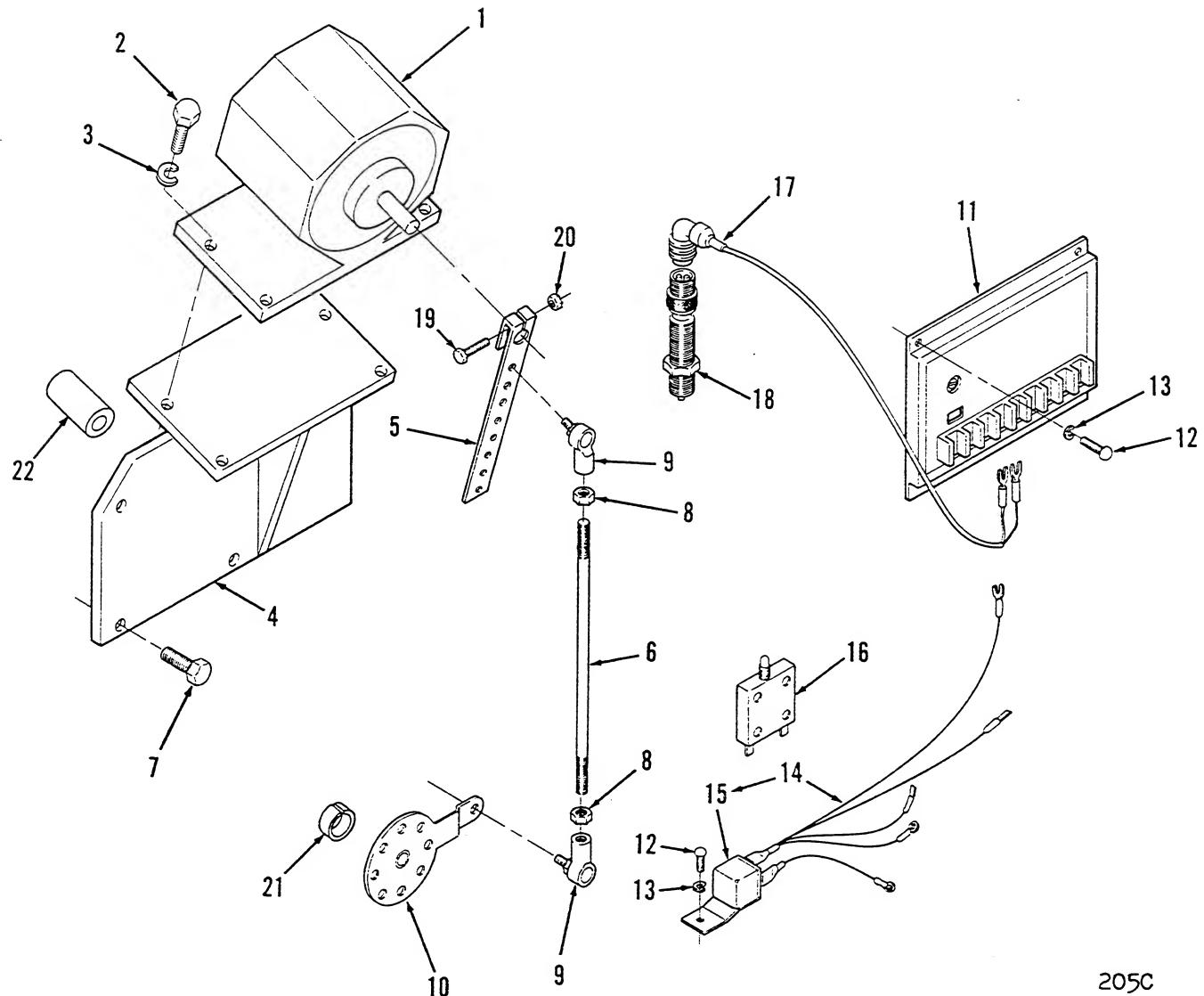
Vernier Throttle Control



217B

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	152-0157	1	Control, Vernier (51")	7	526-0052	1	Washer, Flat (1/4")
2	142-0114	1	Clip, Control Mounting	8	152-0158	1	Swivel
3	821-0018	2	Screw, Locking - Hex Washer Head (1/4-20 x 5/8")	9	815-0104	1	Screw, Machine - Fillister Head (#8-32 x 5/16")
4	870-0212	2	Nut, Self-locking - Hex (1/4-20)	10	151-0230	1	Bracket, Control Mounting
5	813-0103	1	Screw, Machine - Round Head - (#10-32 x 3/4")	11	148-0274	1	Clip, J
6	870-0131	1	Nut, Hex - With ET (#10-32)	12	152-0282	1	Bracket, Control Mounting

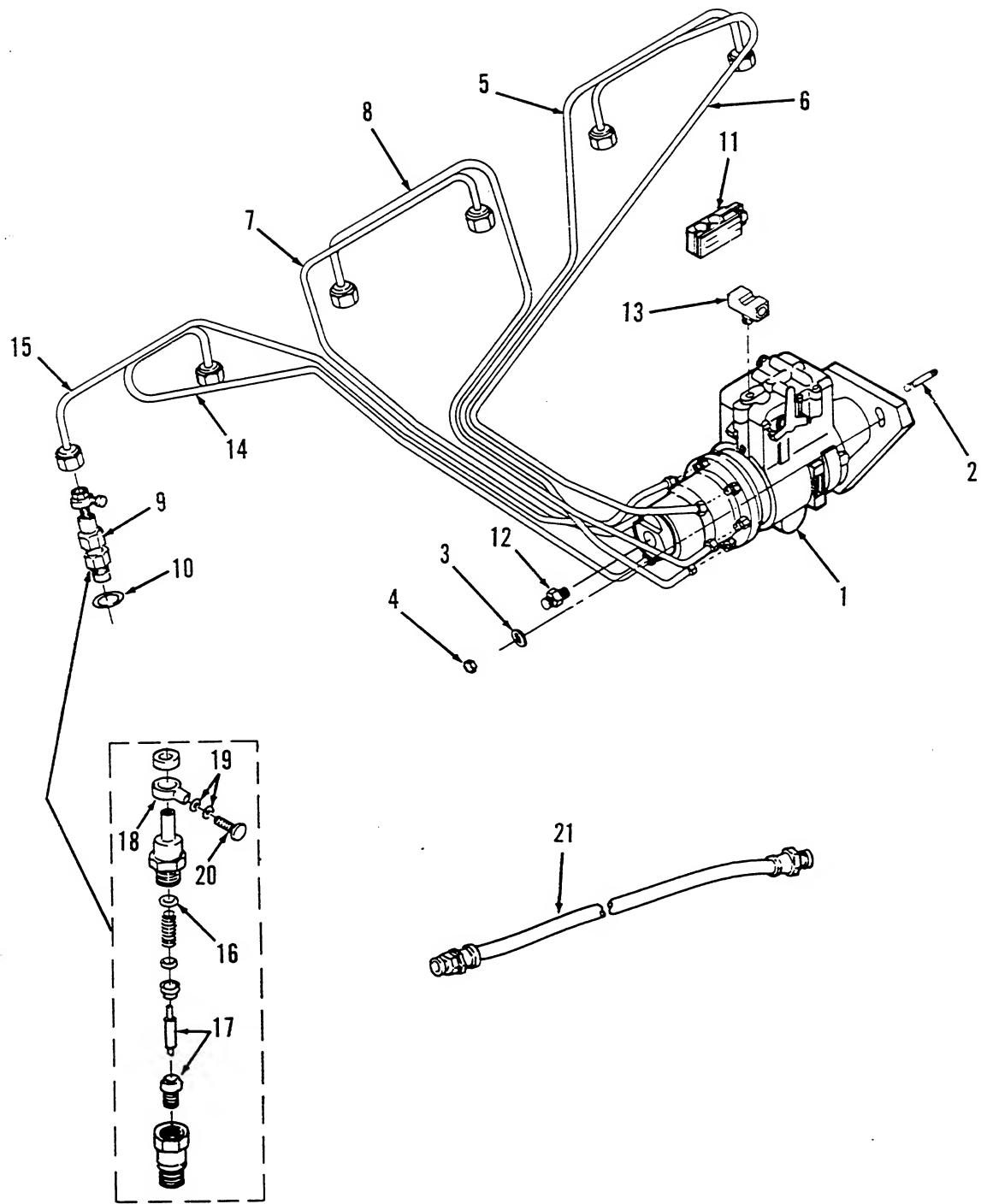
Electronic Governor



205C

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	151-0566	1	Actuator, Governor	12	813-0103	5	Screw, Machine - Round Head (#10-32 x 3/4")
2	800-0006	4	Screw, Cap - Hex Head (1/4-20 x 7/8")	13	850-0030	5	Washer, Lock - Spring (#10)
3	850-0040	4	Washer, Lock - Spring (1/4")	14	338-1705	1	Harness, Wiring - Includes Relay
4	150-1996	1	Bracket, Mounting	15	307-1886	1	Relay
5	151-0567	1	Arm, Governor (Includes Screw and Nut)	16	320-0540	1	Breaker, Circuit - 15 Amp (C813) Includes Mounting Nuts
6	150-1923	1	Rod, Governor Control	17	338-1765-01	1	Cable, Magnetic Pickup (60")
7	800-2071	4	Screw, Cap - Hex Head (M8 x 90 MM)	18	151-0603-02	1	Sensor, Magnetic Speed
8	870-0131	2	Nut, Hex - with ET (#10-32)	19	800-0007	1	Screw, Cap - Hex Head (1/4-20 x 1")
9	150-0939	2	Joint, Ball	20	870-0065	1	Nut, Self-Locking (1/4-20)
10	151-0437	1	Kit, Throttle Modification (Fuel Injection Pump)	21	147-0779	1	Sleeve, Throttle Stop
11	151-0565	1	Control, Governor (A12) (Includes Jumper)	22	130-1107	2	Spacer

Fuel Injection

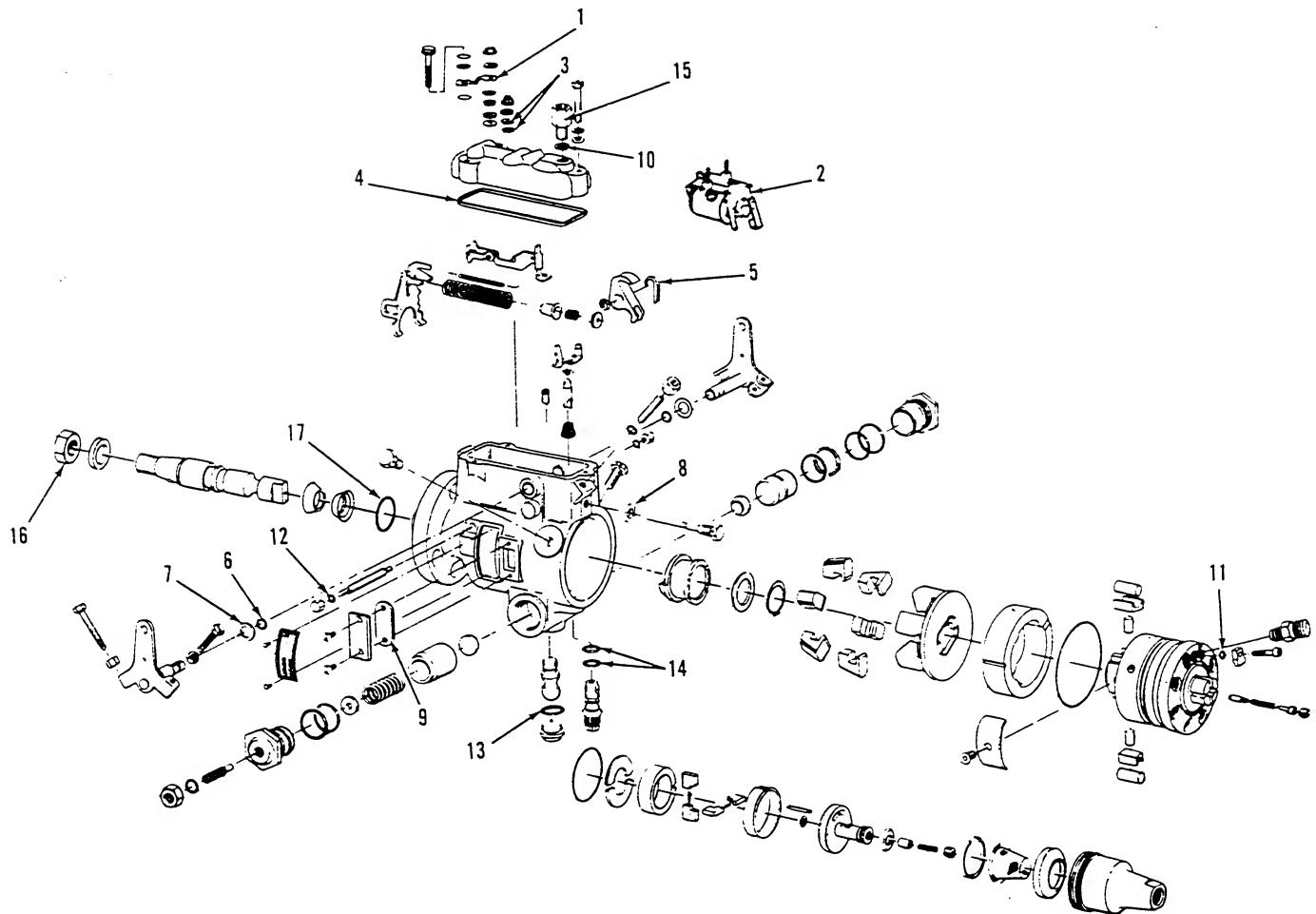


256A

Fuel Injection

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Pump, Fuel Injection (See Separate Page for Components)	16			Washer, Injection Nozzle Shim
	147-0464-05	1	1800 RPM	147-0617	As Req.	0.80 MM	
	147-0464-06	1	1500 RPM	147-0618	As Req.	0.84 MM	
2	520-2403	3	Stud, Injection Pump (M8)	147-0619	As Req.	0.88 MM	
3	526-2106	3	Washer, Flat (M8)	147-0620	As Req.	0.92 MM	
4	750-1006	3	Nut, Hex (M8)	147-0621	As Req.	0.96 MM	
5	147-0666	1	Line, Fuel Injection (No. 1)	147-0622	As Req.	1.00 MM	
6	147-0667	1	Line, Fuel Injection (No. 2)	147-0623	As Req.	1.04 MM	
7	147-0668	1	Line, Fuel Injection (No. 3)	147-0624	As Req.	1.08 MM	
8	147-0669	1	Line, Fuel Injection (No. 4)	147-0625	As Req.	1.12 MM	
9	147-0562	6	Injector, Fuel (Includes Seal)	147-0626	As Req.	1.16 MM	
10	147-0436	6	Seal, Injector	147-0627	As Req.	1.20 MM	
11			Clamp, Fuel Line	147-0628	As Req.	1.24 MM	
	147-0672	3	Clamps Two Lines	147-0629	As Req.	1.28 MM	
	147-0673	2	Clamps Three Lines	147-0630	As Req.	1.32 MM	
	147-0674	1	Clamps Six Lines	147-0631	As Req.	1.36 MM	
12	502-0733	1	Connector	147-0632	As Req.	1.40 MM	
13	502-0057	1	Tee, Pipe - Special	147-0633	As Req.	1.44 MM	
14	147-0670	1	Line, Fuel Injection (No. 5)	147-0634	As Req.	1.48 MM	
15	147-0671	1	Line, Fuel Injection (No. 6)	147-0635	As Req.	1.52 MM	
				147-0636	As Req.	1.56 MM	
				147-0637	As Req.	1.60 MM	
				147-0638	As Req.	1.64 MM	
				147-0639	As Req.	1.68 MM	
				147-0640	As Req.	1.72 MM	
				147-0641	As Req.	1.76 MM	
				147-0642	As Req.	1.80 MM	
				147-0643	As Req.	1.84 MM	
				147-0644	As Req.	1.88 MM	
				147-0645	As Req.	1.92 MM	
				147-0646	As Req.	1.96 MM	
17	147-0647	6	Tip, Nozzle				
18	147-0766	6	Banjo				
19	147-0767	12	Washer				
20	147-0765	6	Screw, Hollow				
21	501-0094	1	Line, Flexible Fuel - 60" (Fuel Return)				

Fuel Injection Pump Components

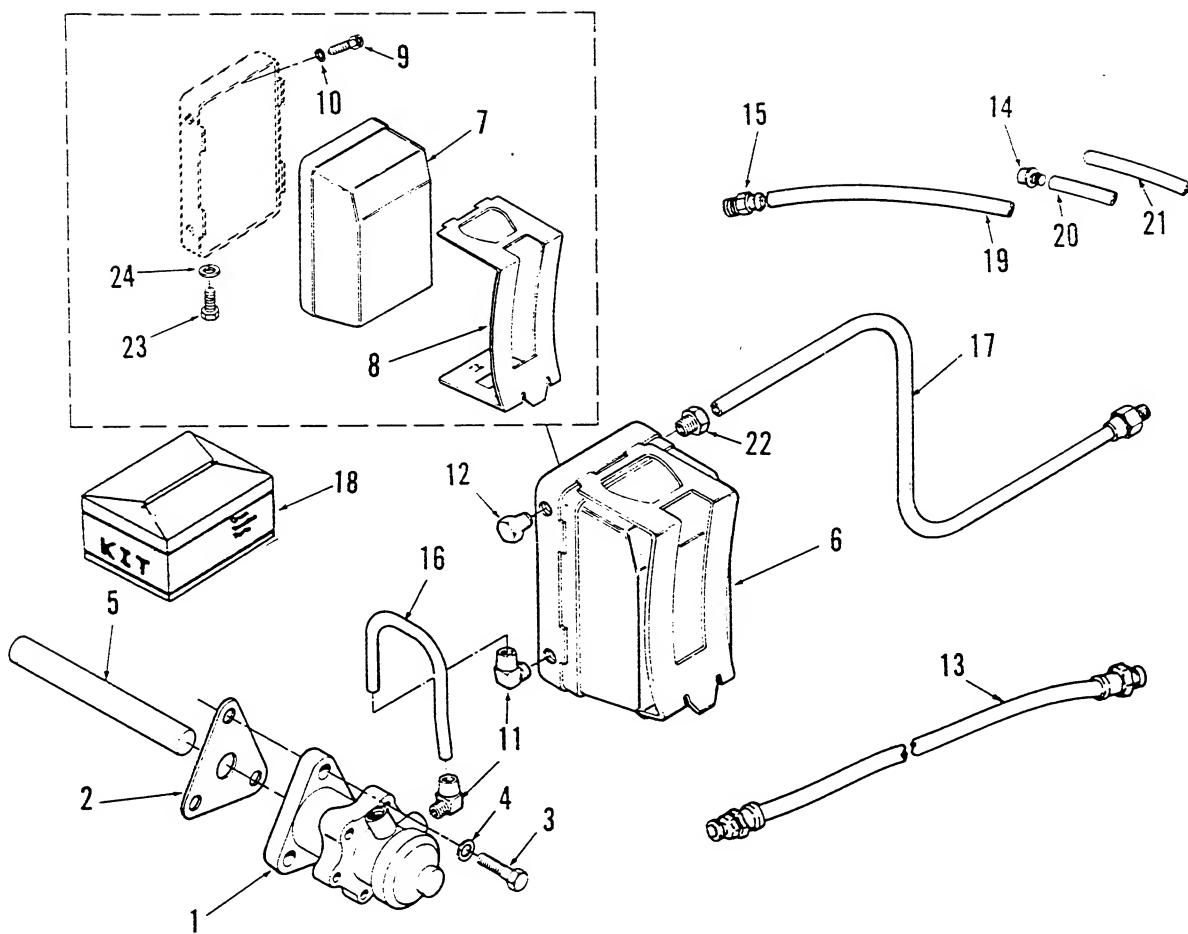


20A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Pump, Fuel Injection - Complete	10	147-0584	1	Seal, Return Line Connector
147-0464-05	1	1	1800 RPM	11	147-0583	1	Seal, Locking Plate
147-0464-06	1	1	1500 RPM	12	147-0582	2	Seal, Pivot Shaft
1 147-0592	1	1	Strap, Terminal Grounding	13	147-0581	1	Seal, Advance Screw Hole Plug
2 147-0593	1	1	Solenoid and Frame Kit	14	147-0580	2	Seal, Head Locating Screws
3 147-0591	2	2	Washer, Terminal Insulating	15	147-0579	1	Connector, Return Line
4 147-0590	1	1	Gasket, Governor Cover	16	147-0578	1	Nut, Drive Shaft
5 147-0589	1	1	Clip, Shaft Retaining	17	509-0265	1	Seal, Pilot Tube
6 147-0588	2	2	Seal, Throttle Shaft				
7 147-0587	2	2	Washer, Throttle Shaft Seal				
8 147-0586	1	1	Washer, Guide Stud				
9 147-0585	1	1	Gasket, Timing Line Cover				

Note: For component parts not listed contact
manufacturer shown on nameplate.

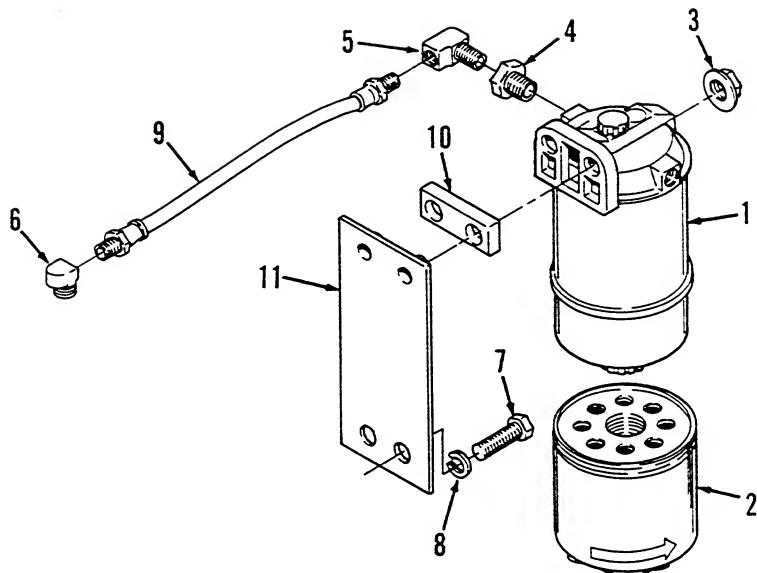
Fuel System



268A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	149-2067	1	Pump Kit, Fuel Transfer (Includes Mounting Gasket)	14	502-0736	1	Plug
2	149-1728	1	Gasket, Fuel Transfer Pump	15	502-0738	1	Connector, Male
3	718-1021	3	Screw, Cap - Hex Head (M6 x 20 MM)	16	149-1797	1	Line, Fuel
4	740-1004	3	Washer, Flat (M6)	17	149-1796	1	Line, Fuel
5	149-1732	1	Pushrod, Fuel Transfer Pump	18	149-2069	1	Repair Package - Transfer Pump
6	149-1755	1	Filter Assembly (Includes Filter, Base, Clamp, Drain Plug, Drain Seal and Plugs)	19	503-1055	1	Line, Fuel Return (Flexible) 380 MM Long
7	149-1754	1	Filter, Fuel	20	503-1054	1	Line, Fuel Return (Flexible) 25 MM Long
8	149-1801	1	Clamp, Fuel Filter	21	503-1053	5	Line, Fuel Return (Flexible) 180 MM Long
9	725-1074	2	Screw, Cap - Socket Head (M10 x 20 MM)	22	502-0773	1	Connector, Flareless Tube Fitting (Includes Sleeve and Nut)
10	740-1008	2	Washer, Flat (M10)	23	149-1835	1	Plug, Filter Drain
11	502-0774	2	Elbow, Flareless Tube Fitting (Includes Sleeve and Nut)	24	149-1836	1	Gasket, Filter Drain Plug
12	502-0153	2	Plug, Pipe (1/4")				
13	501-0441	1	Line, Flexible Fuel - 40" (Fuel Supply)				

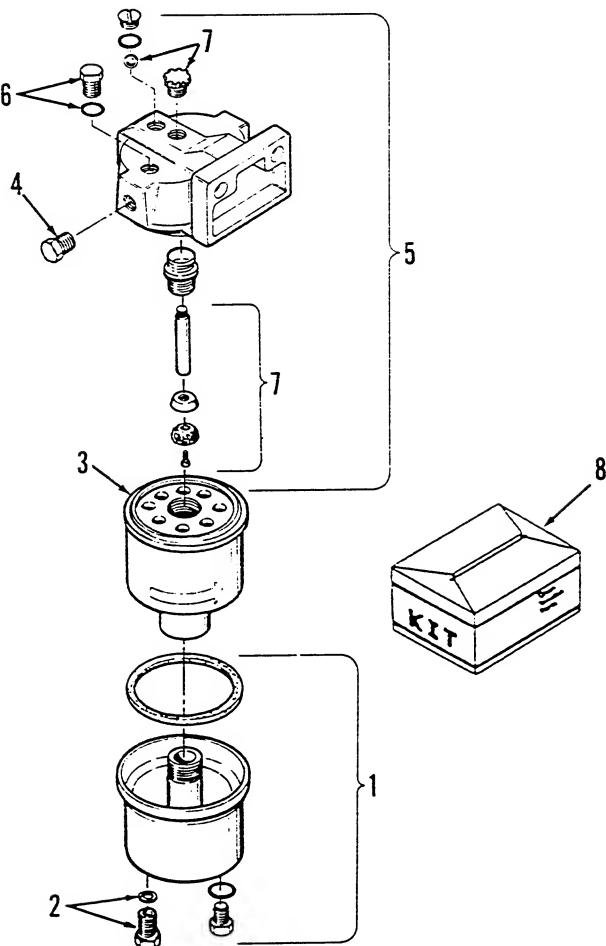
Water Separator



211A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	149-1908-05	1	Separator, Water (Includes Filter Element) (See Separate Page for Components)	6	502-0041	1	Elbow, Male - Inverted
2	149-1914-01	1	Element	7	800-2110	2	Screw, Cap - Hex Head (M12 x 20 MM)
3	870-0257	2	Nut, Self-locking (Flange) (5/16-18)	8	850-2012	2	Washer, Lock - Spring (M12)
4	502-0029	1	Bushing, Reducer (1/4 to 1/8")	9	501-0003	1	Line, Fuel - Flexible (9")
5	502-0020	1	Elbow, Street - 90° (1/8")	10	149-1922	1	Spacer, Mounting
				11	149-2040	1	Bracket, Mounting

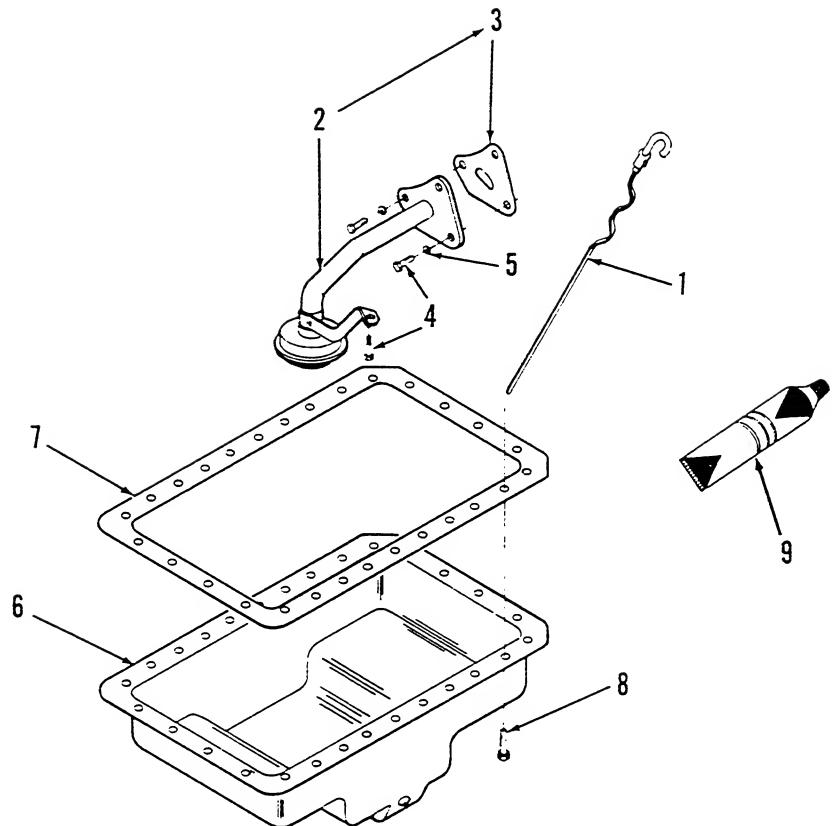
Water Separator Components



FS-1631-2

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	149-1908-05	1	Separator, Water (Complete)	6	149-1952	1	Plug, Vent (Includes O-Ring)
	149-2046	1	Bowl Kit, Metal - Replacement (Includes Plug, O-Rings and Drain Assembly)	7	149-2047	1	Pump Assembly (Includes Plunger, Retainer, Shaft, Check Ball, Knob and Screw)
2	149-1953	1	Drain Assembly (Includes Knob and Seal)	8	149-2045	1	O-Ring Kit (Includes Seal and Plunger)
3	149-1914-01	1	Element (Includes Seals)				
4	502-0153	1	Plug, Hex (1/4")				
5	149-1949	1	Head Assembly - Replacement (Includes Vent Plug, O-Rings, Seal, Cap, Tube and Pump Assembly)				

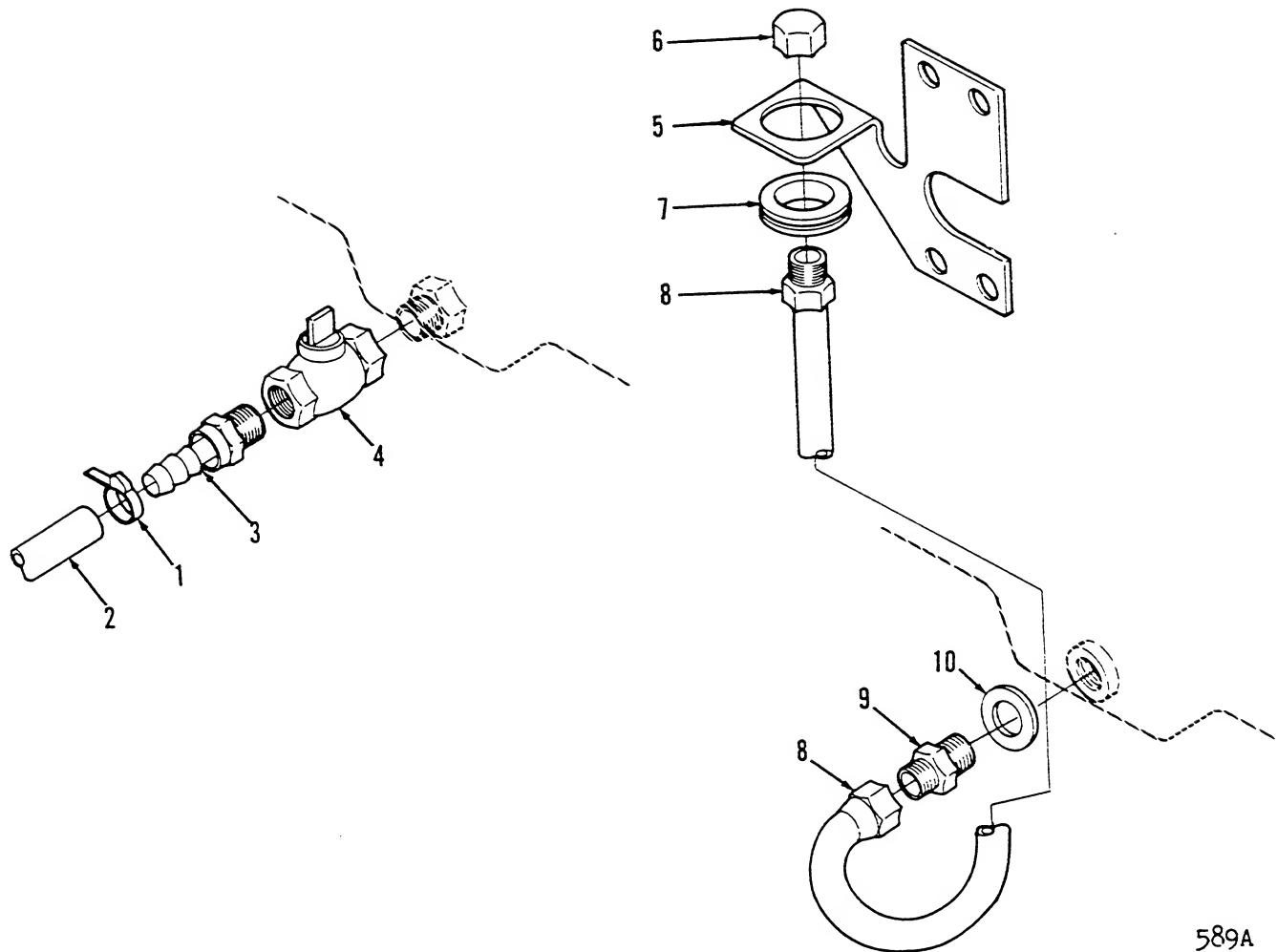
Oil Pan



66A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	123-1524	1	Indicator, Oil Level	5	740-1006	4	Washer, Flat (M8)
2	120-1006	1	Pickup Kit, Oil (Includes Gasket)	6	102-1190	1	Pan, Oil
3	120-0917	1	Gasket, Oil Pickup	7	102-1036	1	Gasket, Oil Pan (Spec C and D)
4	718-1046	1	Screw, Cap - Hex Head M8 x 70 MM	8	815-0547	36	Screw, Cap - Hex Head (M8 x 20 MM) Includes Washer
	718-1036	2	M8 x 20 MM	9	541-0286	1	Kit, RTV Sealant - Oil Pan Mounting - Spec E

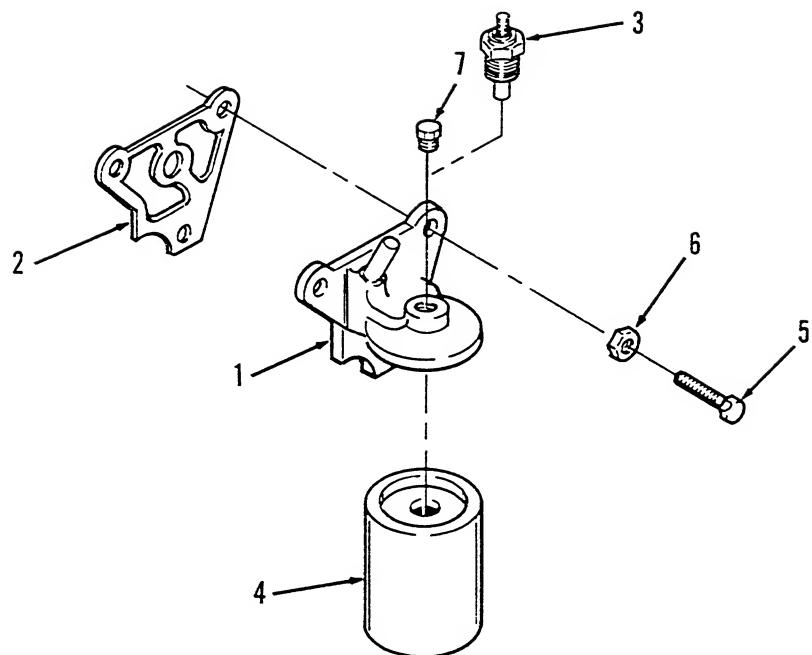
Oil Drain Hardware



589A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0382	1	Clamp, Hose - Spec C	6	502-0876	1	Cap, Pipe - Begin Spec D
2	503-1276	1	Hose, Oil Drain (14") - Spec C	7	508-0250	1	Grommet - Begin Spec D
3	502-0415	1	Adapter, Pipe to Hose - Spec C	8	501-0482	1	Line, Oil Drain (24") - Begin Spec D
4	504-0011	1	Valve, Shutoff - Spec C	9	102-1237	1	Adapter, Oil Drain - Begin Spec D
5	102-1235	1	Bracket, Oil Drain - Begin Spec D	10	102-1147	1	Gasket - Begin Spec D

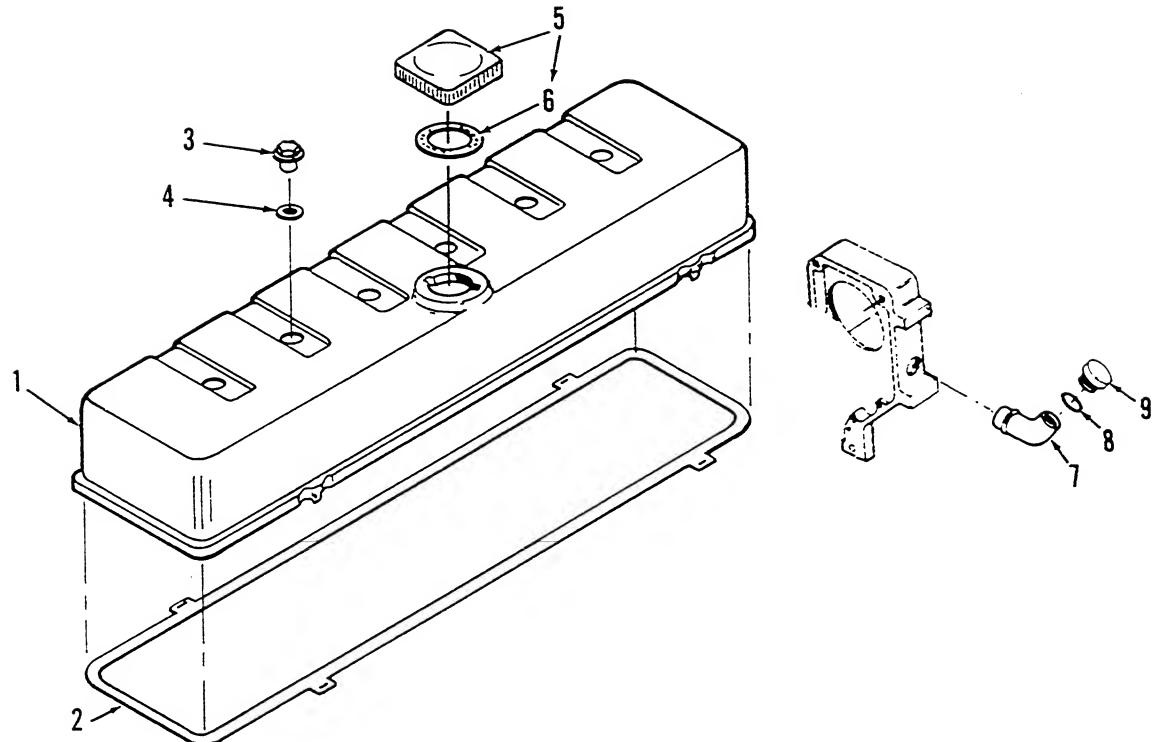
Oil Filter



479A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	122-0613	1	Adapter, Oil Filter (Includes Gasket)	4	122-0550	1	Filter, Oil
2	122-0635	1	Gasket, Adapter	5	725-1051	3	Screw, Cap - Socket Head (M8 x 25 MM)
3	193-0353	1	Sender, Oil Temperature (E3) Controls With 2 Indicator Lights and Oil Temperature Gauge	6	526-2108	3	Washer, Flat (M8)
				7	505-0274	1	Plug, Pipe - Countersunk (1/8")

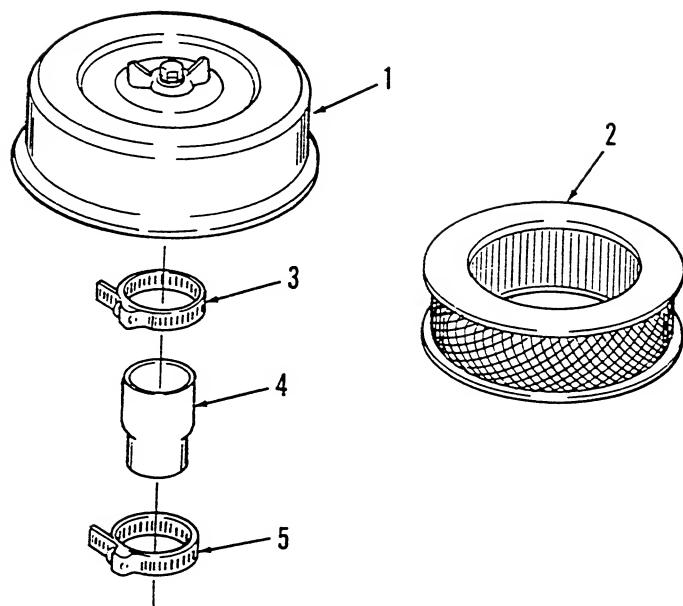
Oil Fill



65A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	115-0346	1	Cover, Rocker	6	123-1518	1	Gasket, Oil Fill Cap
2	115-0244	1	Gasket, Rocker Cover	7	123-1558	1	Tube, Oil Fill
3	115-0320	6	Capnut, Rocker Cover	8	509-0142	1	Seal, O-Ring
4	115-0232	6	Gasket, Capnut	9	123-1647	1	Cap, Oil Fill
5	123-1605	1	Cap, Oil Fill (Includes Gasket)				

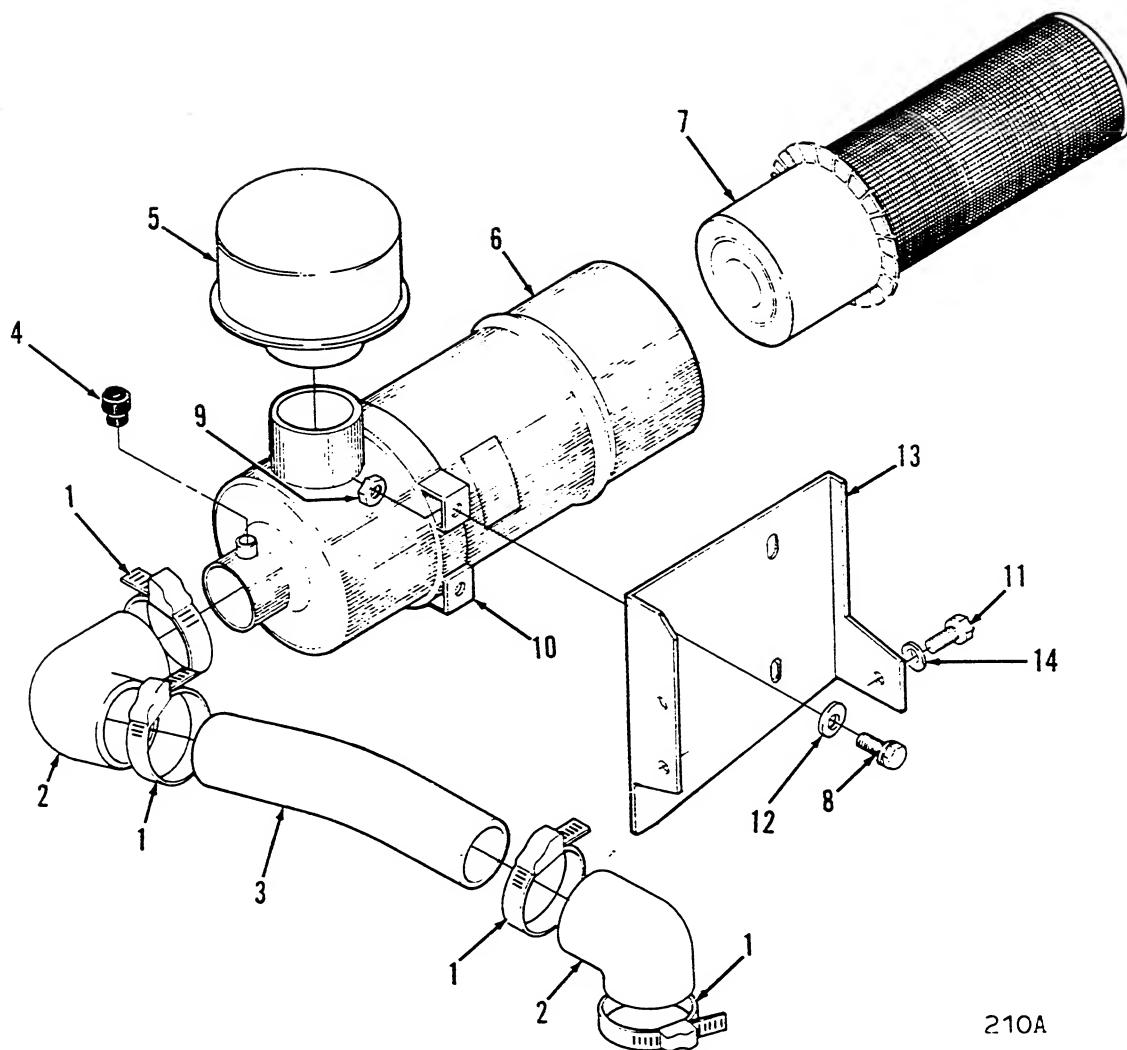
Air Cleaner
(Standard)



213A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	140-1091	1	Cleaner Assembly, Air (Includes Element)	3	503-0648	1	Clamp, Hose
2	140-1089	1	Element	4	503-1181	1	Hose, Reducing
				5	503-0465	1	Clamp, Hose

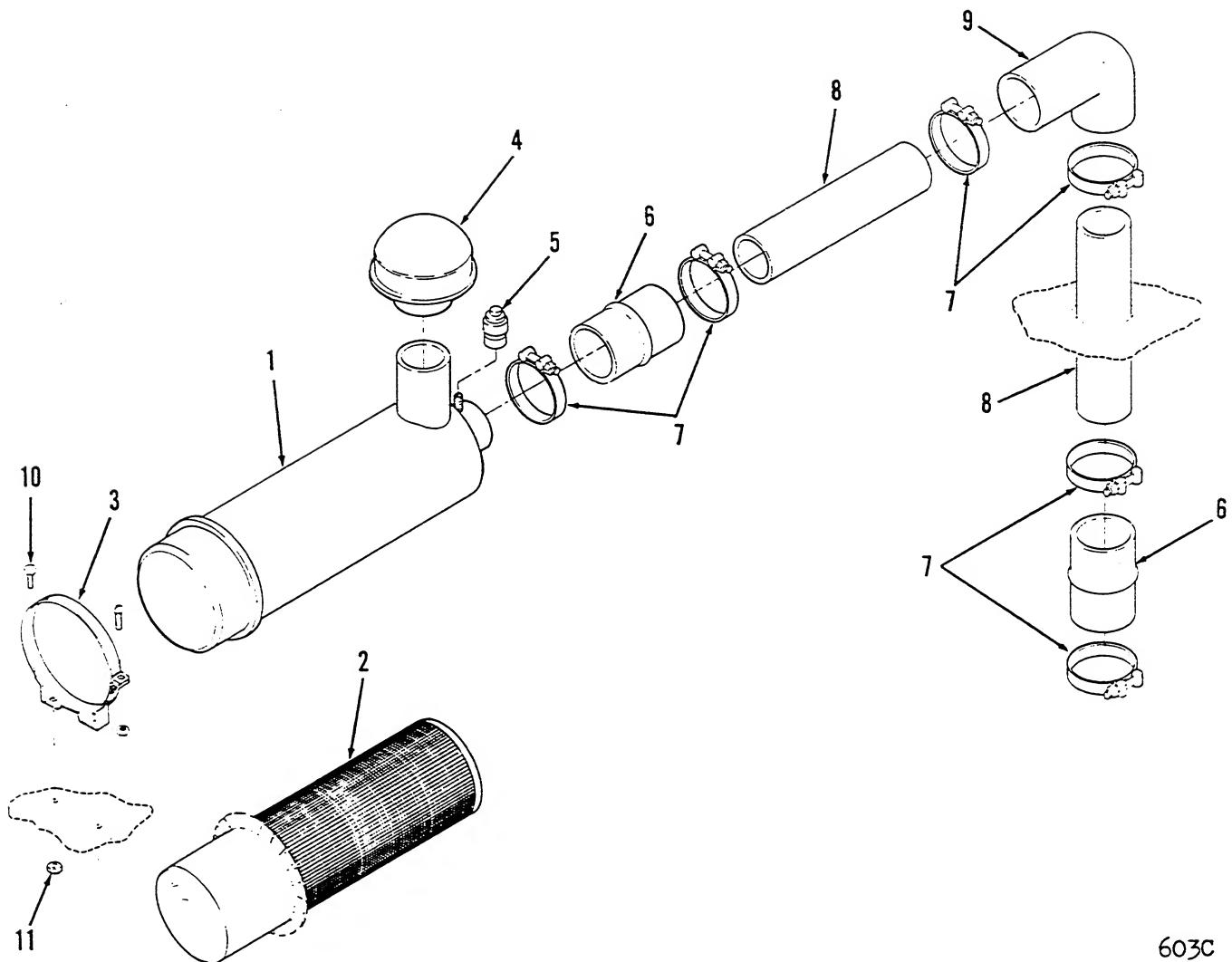
**Air Cleaner
(Heavy Duty)**



210A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0354	4	Clamp, Hose	9	750-1006	4	Nut, Hex (M8)
2	503-1222	2	Elbow, 90°	10	140-0722	2	Band, Mounting
3	140-1845	1	Tube, Intake	11	718-1073	1	Screw, Cap - Hex Head (M12 x 25 MM)
4	140-1791	1	Indicator, Service	12	740-1006	4	Washer, Flat (M8)
5	140-1787	1	Hood, Air Cleaner	13	140-1847	1	Bracket, Mounting
6	140-1841	1	Cleaner, Air (Includes Element)	14	740-1010	1	Washer, Flat (M12)
7	140-1851	1	Element				
8	718-1036	4	Screw, Cap - Hex Head (M8 x 20 MM)				

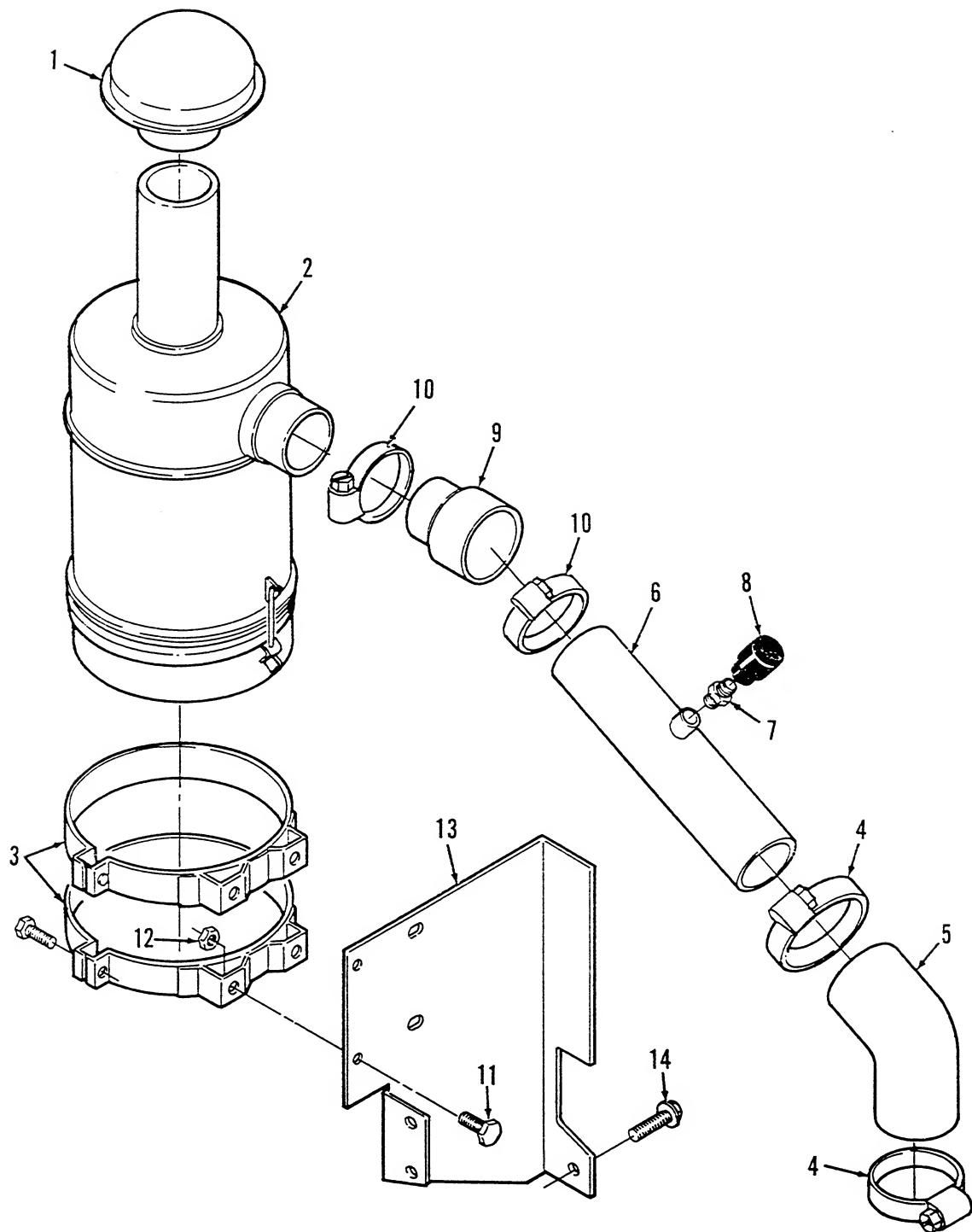
**Air Cleaner
(Housed Sets)**



603C

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	140-1841	1	Cleaner, Air (Includes Element)	7	503-0867	6	Clamp, T-Bolt
2	140-1851	1	Element	8	140-2267	2	Tube, Air Inlet
3	140-0722	2	Band, Mounting	9	503-1222	1	Elbow
4	140-1787	1	Hood, Air Cleaner	10	821-0016	4	Screw, Self-Locking - Hex
5	140-1791	1	Indicator, Service	11	870-0257	4	Washer Head (5/16-18 x 3/4")
6	503-0625	2	Hose (2-1/2" ID x 4-1/2")			4	Nut, Locking - Hex Head (5/16-18)

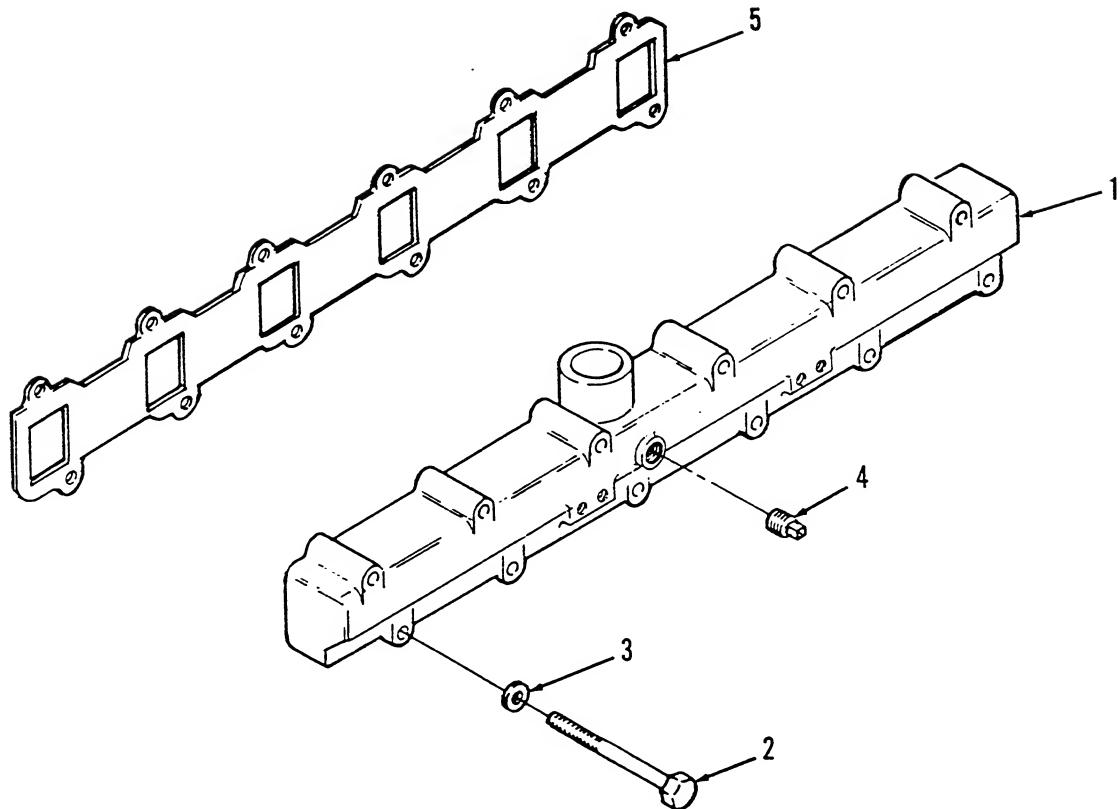
Air Cleaner
(Oil Bath)



604B

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	140-1559	1	Hood	10	503-0465	2	Clamp
2	140-2174	1	Cleaner, Air - Oil Bath	11	821-0014	4	Screw, Self-Locking - Hex Washer Head (5/16-18 x 1/2")
3	140-2233	2	Band, Mounting	12	870-0257	4	Nut, Locking - Hex Head (5/16-18)
4	503-1143	2	Clamp	13	140-2235	1	Bracket, Mounting
5	503-1084	1	Elbow, Reducer	14	821-2076	1	Screw, Self-Locking - Hex Washer Head (M12 x 25 MM)
6	140-2234	1	Tube, Air Inlet				
7	140-1260	1	Fitting, Service Indicator				
8	140-1791	1	Indicator, Service				
9	503-1074	1	Hose, Reducer				

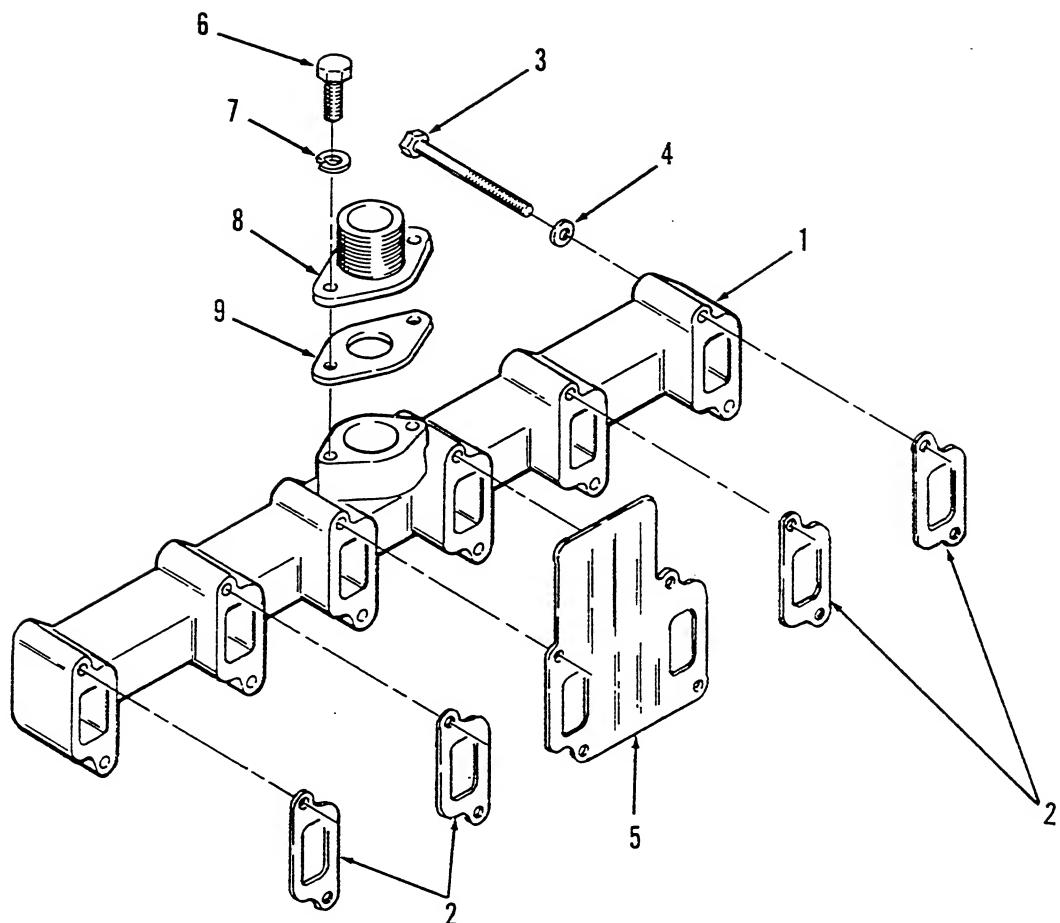
Intake Manifold



587A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	154-2461	1	Manifold, Intake Spec C and D (Includes Plug)	3	740-1006	12	Washer, Flat (M8)
	154-2604	1	Spec E	4	505-0274	1	Plug, Pipe (1/8")
2	718-1801	12	Screw, Cap - Hex Head Spec C and D (M8 x 85 MM)	5	154-2300	1	Gasket, Intake Manifold
	718-1801	6	Spec E				
	718-1042	6	M8 x 85 MM				
		6	M8 x 50 MM				

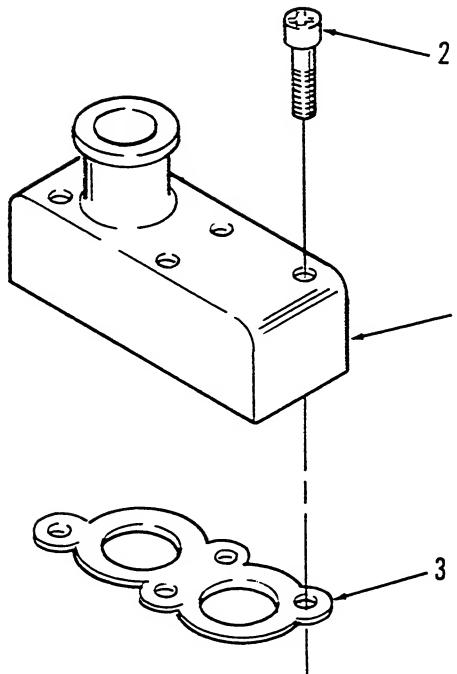
Exhaust Manifold



259A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	154-2389	1	Manifold, Exhaust	6	720-1072	2	Screw, Cap - Hex Head (M12 x 20 MM)
2	154-2162	4	Gasket, Exhaust Manifold	7	850-2012	2	Washer, Lock (M12)
3	800-2524	12	Screw, Cap - Hex Head (M8 x 90 MM)	8	155-1916	1	Flange, Exhaust
4	740-1006	12	Washer, Flat (M8)	9	155-1920	1	Gasket, Exhaust Flange
5	154-2325	1	Gasket, Exhaust Manifold				

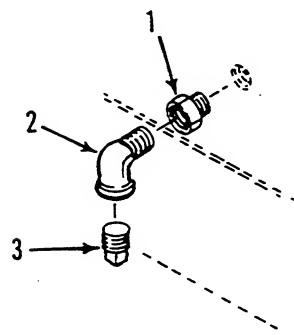
Coolant Outlet Connector



207A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	309-0473	1	Cover, Thermostat (Includes Gasket)
2	725-1056	4	Screw, Cap - Socket Head (M8 x 50MM)
3	309-0424	1	Gasket, Thermostat Cover

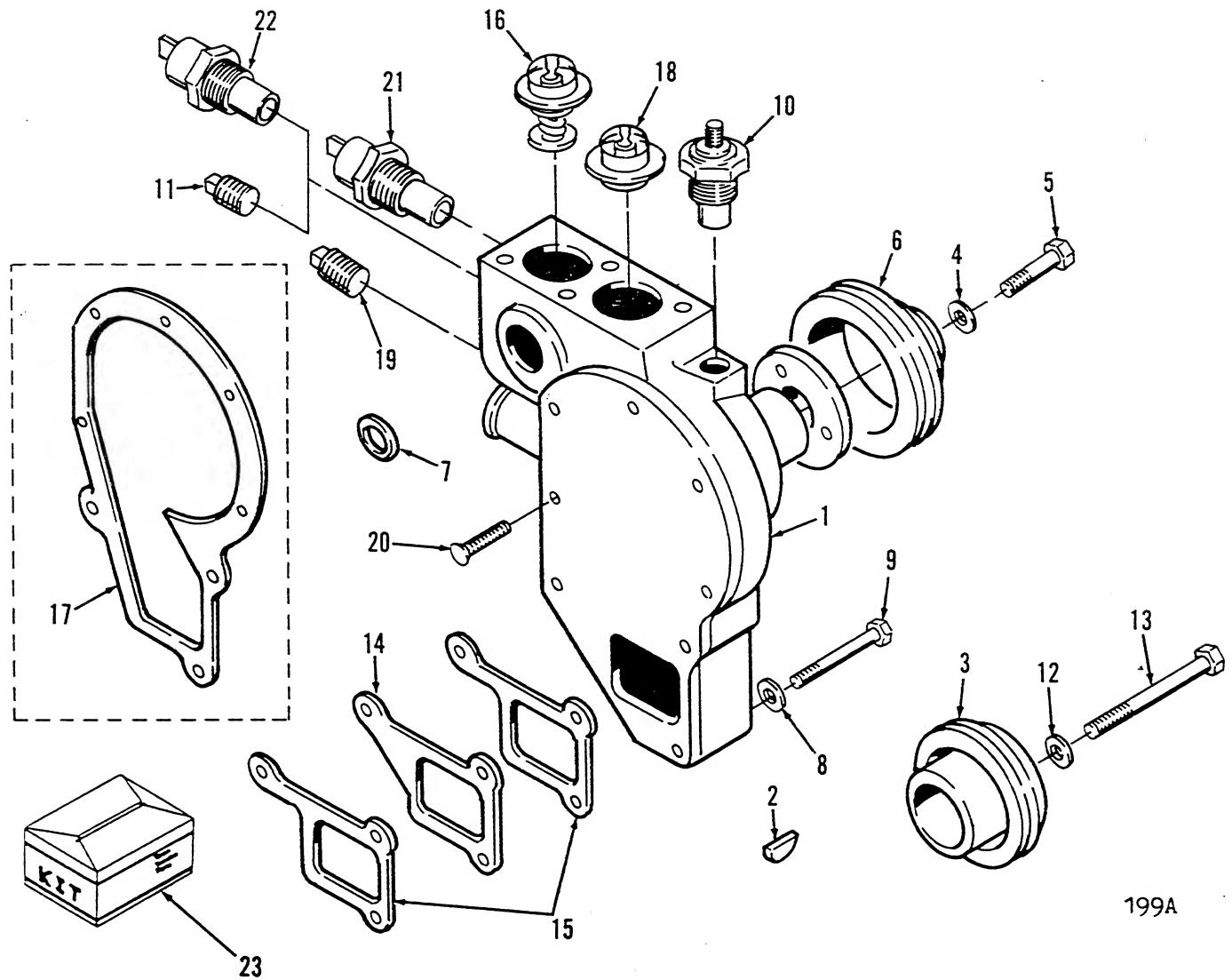
**Coolant Heater Connection
(Begin Spec D)**



224A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	505-0017	1	Bushing
2	502-0156	1	Elbow, Street
3	502-0153	1	Plug, Brass

Coolant Pump

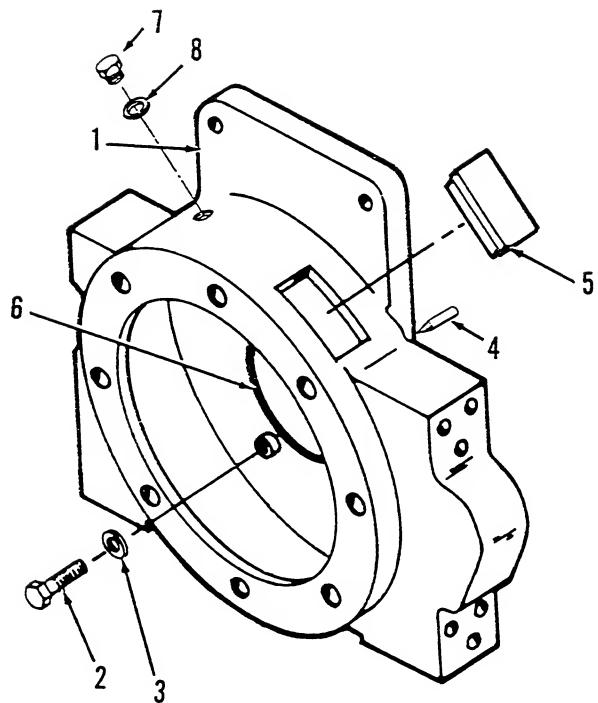


199A

23

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	131-0351	1	Kit, Coolant Pump (Includes Mounting Gaskets)	17	131-0335	1	Gasket, Backplate
2	515-0245	1	Key - Crankshaft Pulley	18	309-0462	1	Kit, Thermostat (180°) Includes Cover Gasket
3	104-1472	1	Pulley, Crankshaft	19	502-0317	1	Plug, Pipe (3/4")
4	740-1006	4	Washer, Flat (M8)	20	815-0612	5	Screw, Countersunk - Flat Head - Torque Drive (Special)
5	718-1035	4	Screw, Cap - Hex Head (M8 x 16 MM)	21	309-0437	1	Switch, Thermostat - High Engine Coolant Temperature (S2) (Opens at 202° F. - Closes at 222° F.)
6	131-0342	1	Pulley, Coolant Pump	22	309-0436	1	Switch, Thermostat - High Engine Coolant Temperature (S6 - Pre-Alarm) (Opens at 196° F. - Closes at 216° F.)
7	509-0264	1	Seal, O-Ring				Controls With 7, 9 or 12 Indicator Lights
8	740-1006	3	Washer, Flat (M8)				Kit, Repair (Includes Gaskets, Seal, Hub, Bearing, Impeller and Backplate Mounting Screws)
9	718-1044	3	Screw, Cap - Hex Head (M8 x 60 MM)				
10	193-0318	1	Sender, Water Temperature (E2)				
11	502-0775	1	Plug, Pipe (3/8") Controls with 2 Indicator Lights				
12	526-0283	1	Washer, Flat (M8)				
13	720-1123	1	Screw, Cap - Hex Head (M16 x 60 MM)				
14	131-0324	1	Spacer, Coolant Pump				
15	131-0294	2	Gasket, Pump Mounting				
16	309-0458	1	Kit, Thermostat (192°) (Includes Cover Gasket)				

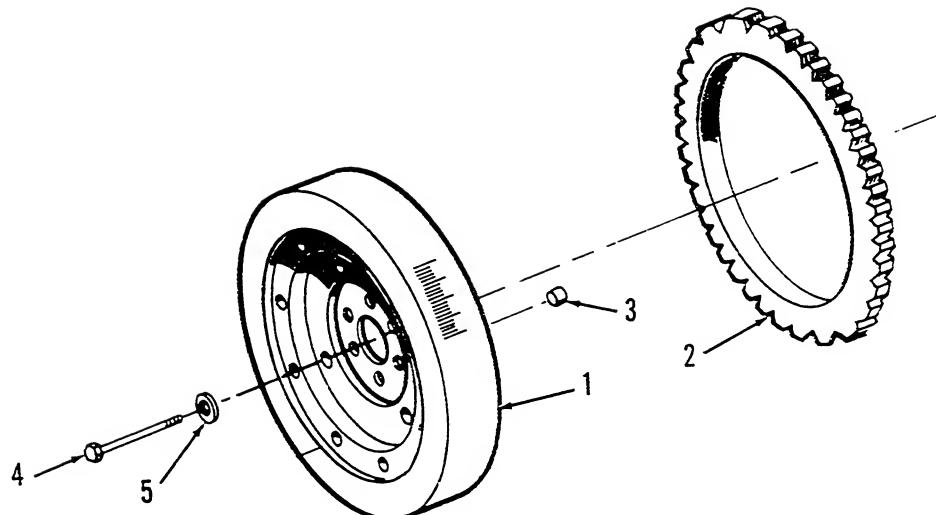
Flywheel Housing



299A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Housing, Flywheel (Includes Seal and Indicator)	3	740-1801	6	Washer, Flat (M12)
	101-0740-01	1	Spec C	4	160-1292	1	Indicator, Timing
	101-0740-02	1	Begin Spec D	5	101-0592	1	Plug, Timing Window
2	718-1078	6	Screw, Cap - Hex Head (M12 x 50 MM)	6	101-0630	1	Seal, Flywheel Housing
				7	505-2012	1	Plug, Hex
				8	740-1014	1	Washer, Flat (M16)

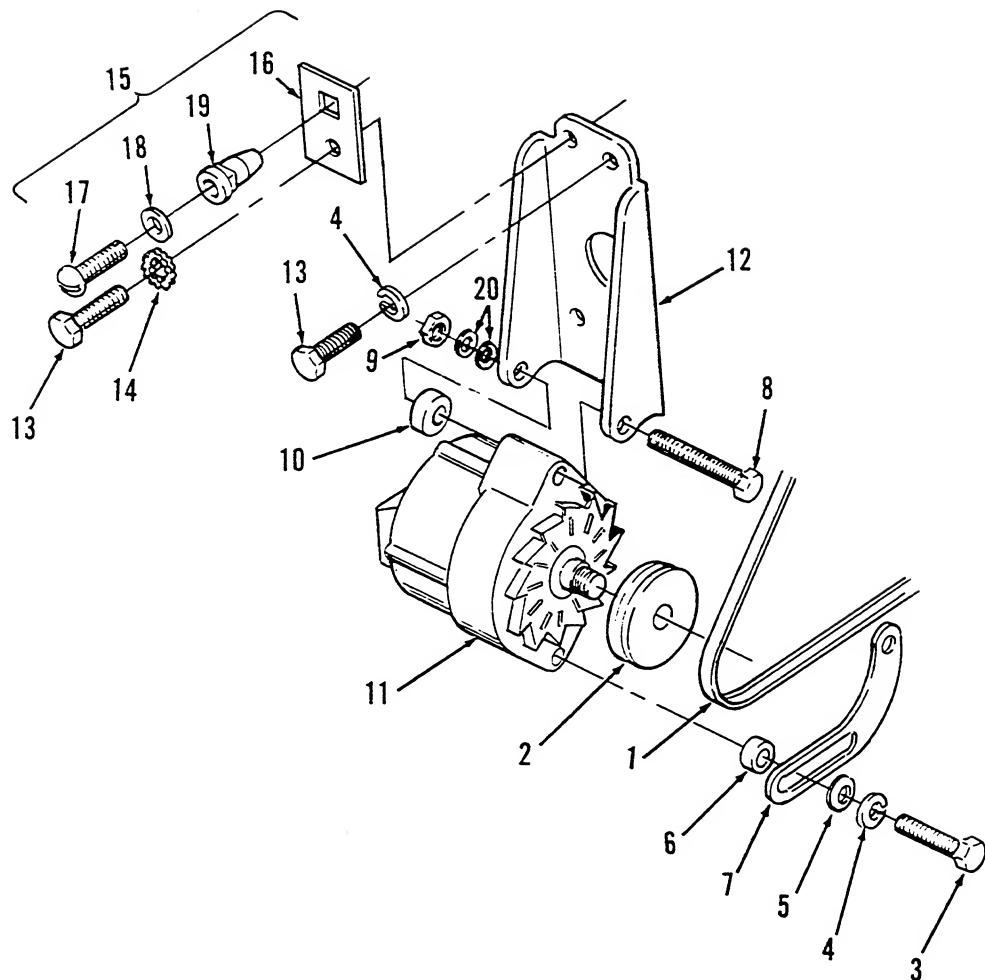
Flywheel



298A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	104-1503	1	Flywheel Assembly (Includes Ring Gear and Alignment Pin)	4	720-1804	6	Screw, Cap - Flange Hex Head (M10 x 38 MM)
2	104-1185	1	Gear, Ring	5	740-1008	6	Washer, Flat (M10)
3	104-1171	1	Pin, Alignment				

Alternator

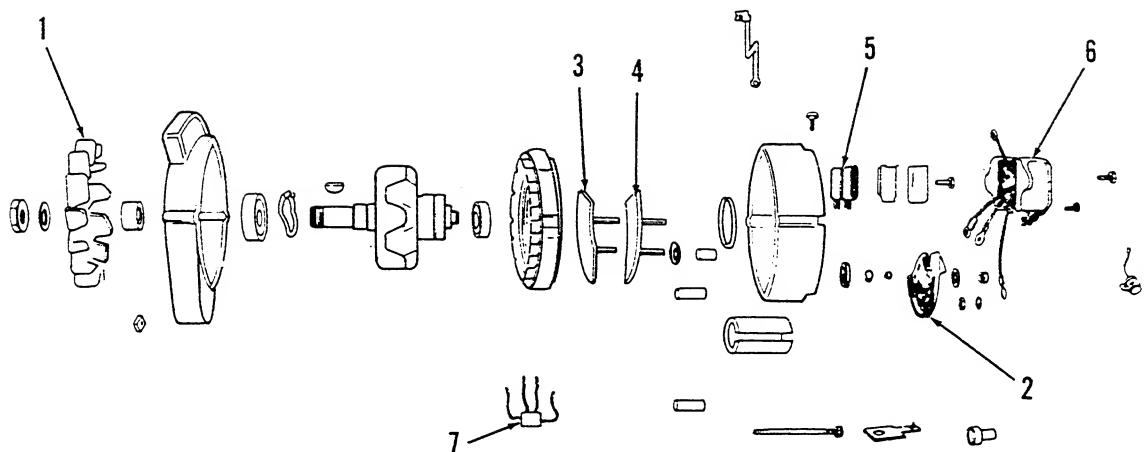


202A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	511-0147-13	1	Belt	12	191-1332	1	Bracket, Mounting
2	191-1339	1	Pulley	13	718-1037	4	Screw, Cap - Hex Head (M8 x 25 MM)
3	800-2060	1	Screw, Cap - Hex Head (M8 x 35 MM)	14	856-0010	1	Washer, Lock - EIT (3/8")
4	850-2008	4	Washer, Lock - Spring (M8)	15	332-1292	1	Terminal Assembly (Includes Parts Marked *)
5	526-2106	1	Washer, Flat (M8)	16	332-1281	1	*Bracket, Terminal
6	191-1541	1	Spacer	17	809-0035	1	*Screw, Sheet Metal - Round Head (#8 x 3/4")
7	191-1312	1	Strap, Adjusting	18	508-0015	1	*Washer, Fiber
8	800-2100	1	Screw, Cap - Hex Head (M10 x 100 MM)	19	870-0196	1	*Nut, Insulation
9	860-2009	1	Nut, Hex (M10)	20	740-1008	2	Washer, Flat (M10)
10	191-1321	1	Spacer				
11	191-1525	1	Alternator (37 Amp) (G1) See Separate Page for Components				

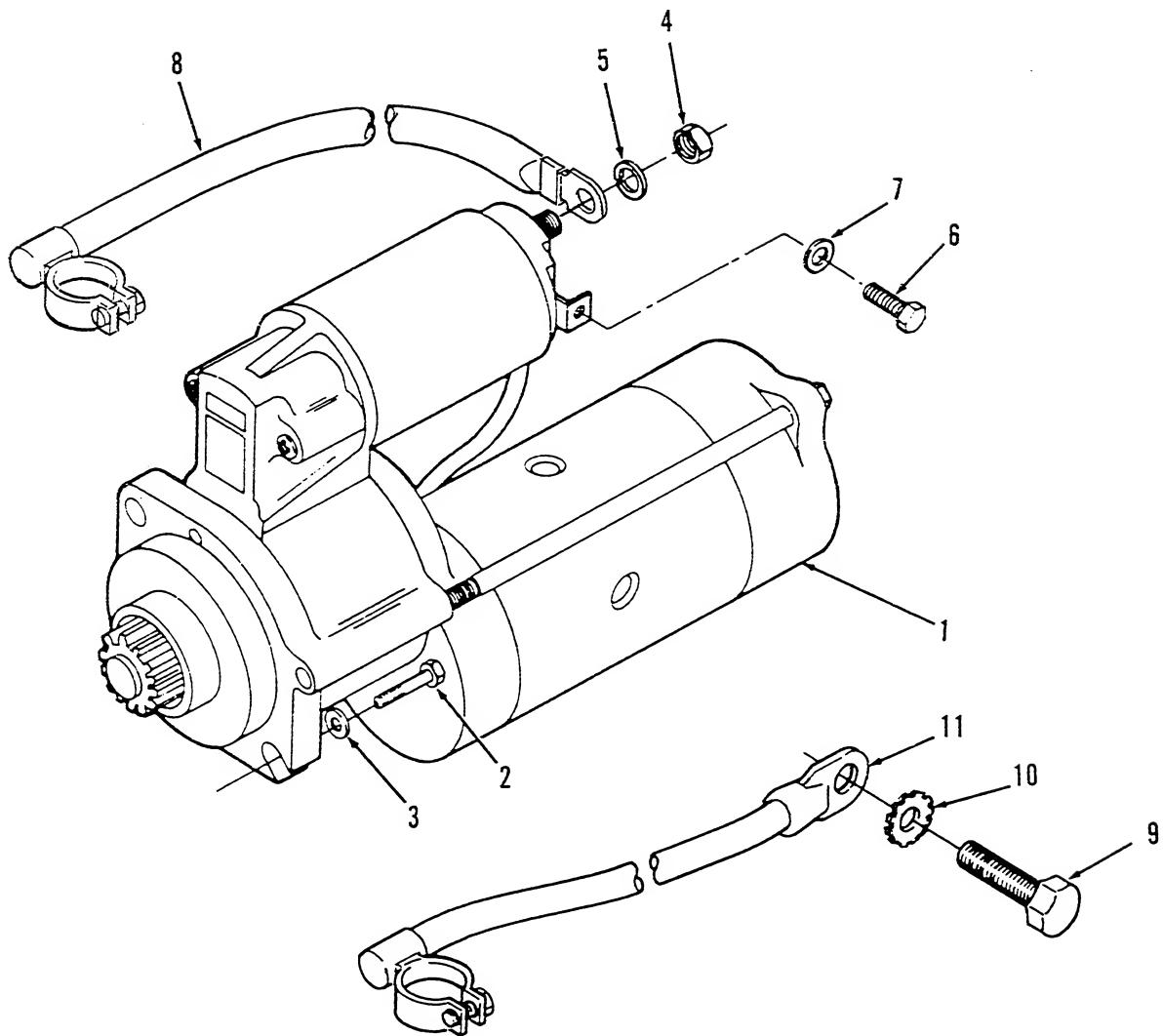
* - Parts Included in 332-1292 Terminal Assembly

Alternator Components



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	191-1525	1	Alternator (Complete) Used Beginning on Late Spec C Models - Has No Isolation Diodes on Back Side of Alternator (Replaces Early Spec C Models with Isolation Diode Assembly on Back Side of Alternator)	5			Brush Assembly Spec C
1	191-0943	1	Fan, Alternator	191-0659		1	Used on Early Spec C Models with Isolation Diode Assembly
2	191-1454	1	Diode Assembly, Isolation - Used on Early Spec C Models	191-1558		1	Used on Late Spec C Models without Isolation Diode Assembly
3			Diode, Rectifier - Negative Spec C	191-1457		1	Begin Spec D
	191-1453	1	Used on Early Spec C Models with Isolation Diode Assembly	191-1558		1	Regulator, Voltage Spec C
	191-1560	1	Used on Late Spec C Models without Isolation Diode Assembly	191-1457		1	Used on Early Spec C Models with Isolation Diode Assembly
	191-1560	1	Begin Spec D	191-1557		1	Used on Late Spec C Models without Isolation Diode Assembly
4			Diode, Rectifier - Positive Spec C	191-1557		1	Begin Spec D
	191-1452	1	Used on Early Spec C Models with Isolation Diode Assembly	191-1556		1	Diode, Trio - Used Beginning on Late Spec C Models Without Isolation Diode Assembly
	191-1559	1	Used on Late Spec C Models without Isolation Diode Assembly				
	191-1559	1	Begin Spec D				

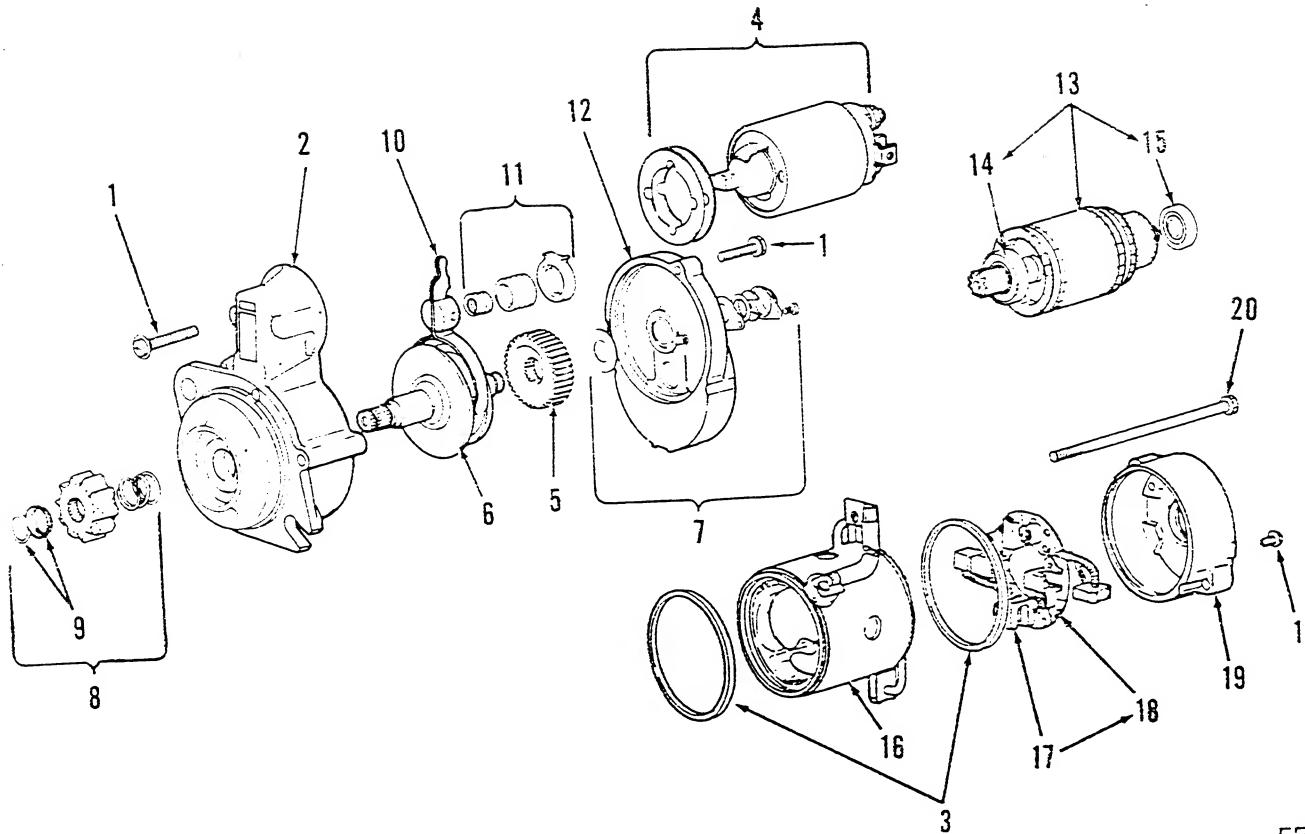
Starter



260A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Starter (B1) (Includes Switch Terminal Hardware) (See Separate Page for Components)	6	718-1002	1	Screw, Cap - Hex Head (M5 x 8 MM) Solenoid Terminal
	191-1394	1	Used Spec C through Early Portion of Spec D	7	850-2005	1	Washer, Lock - Spring (M5) Solenoid Terminal
	191-1888	1	Use Began During Later Portion of Spec D	8	416-0618	1	Cable, Battery - 42" (Positive)
2	720-1806	2	Screw, Cap - Flanged Hex Head (M12 x 30 MM)	9	800-2110	1	Screw, Cap - Hex Head (M12 x 20 MM)
3	740-1010	2	Washer, Flat (M12)	10	853-2012	1	Washer, Lock - ET (M12)
4	860-2008	1	Nut, Hex (M8) B+ Terminal	11	416-0530	1	Cable, Battery - 16" (Negative)
5	850-2008	1	Washer, Lock - Spring (M8) B+ Terminal				

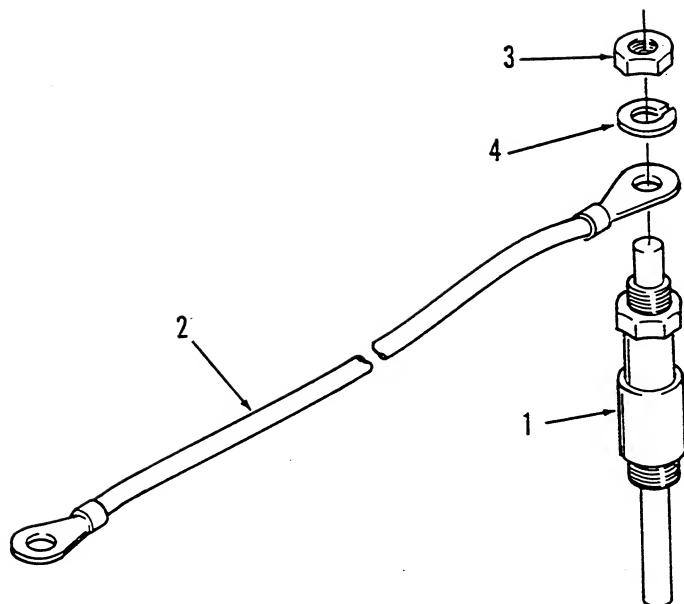
Starter Components



575A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	191-1394	1	Starter (Complete) Used Spec C Through Early Portion of Spec D	9	191-1442	1	Stopper Set (Includes Stopper and Ring)
	191-1888	1	Use Began During Later Portion of Spec D	10	191-1441	1	Lever Assembly
1	191-1450	1	Screw Set	11	191-1440	1	Spring Set
2	191-1449	1	Bracket Assembly, Front (Includes Bearing)	12	191-1439	1	Bracket Assembly, Center
3	191-1893	2	Ring, "O" - Sealing (Used on 191-1888 Starter)	13	191-1438	1	Armature Assembly (Includes Bearings)
4	191-1430	1	Switch Assembly	14	191-1437	1	Bearing, Center
5	191-1446	1	Gear	15	191-1436	1	Bearing, Rear
6	191-1445	1	Clutch	16	191-1435	1	Yoke Assembly (Includes Pole Shoes, Field Coil and Positive Brushes)
7	191-1444	1	Cover Set (Includes Cover, Plate, Washers, Snap Ring, and Screws)	17	191-1434	1	Holder, Brush (Includes Negative Brushes)
8	191-1443	1	Pinion Set (Includes Pinion, Spring, and Stopper Set)	18	191-1433	4	Spring, Brush
				19	191-1432	1	Bracket, Rear
				20	191-1431	1	Bolt Set

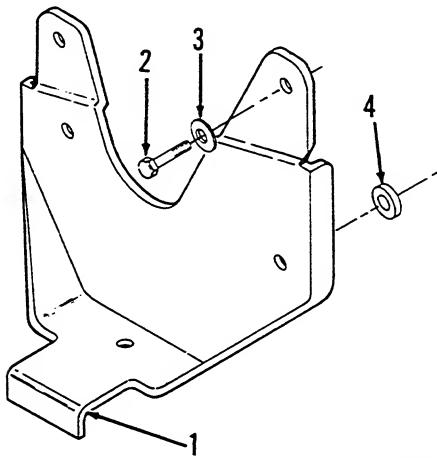
Glow Plug



212A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	333-0220	6	Plug, Glow	3	750-1002	6	Nut, Hex (M5)
2	336-4131	5	Lead, Glow Plug	4	850-2005	6	Washer, Lock - Spring (M5)

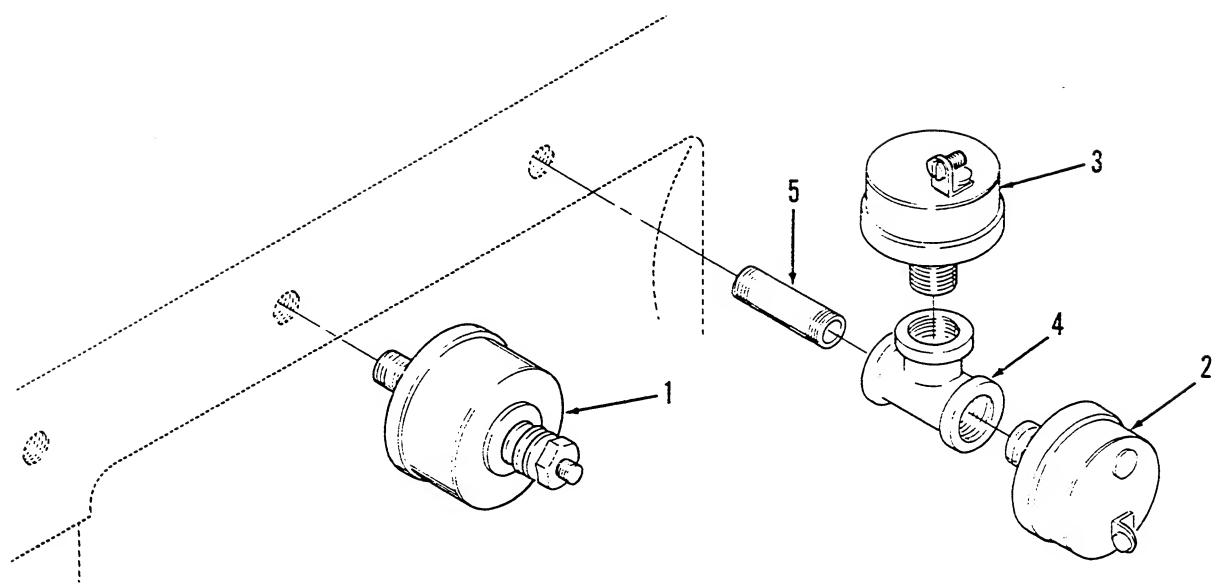
Front Engine Mount



M-1548

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	403-1925	1	Bracket, Mount	3	740-1010	4	Washer, Flat (M12)
2	718-1086	2	Screw, Cap - Hex Head M12 x 90 MM (Top)	4	403-1932	2	Spacer, Bracket Mounting
	718-1802	2	M12 x 95 MM (Bottom)				

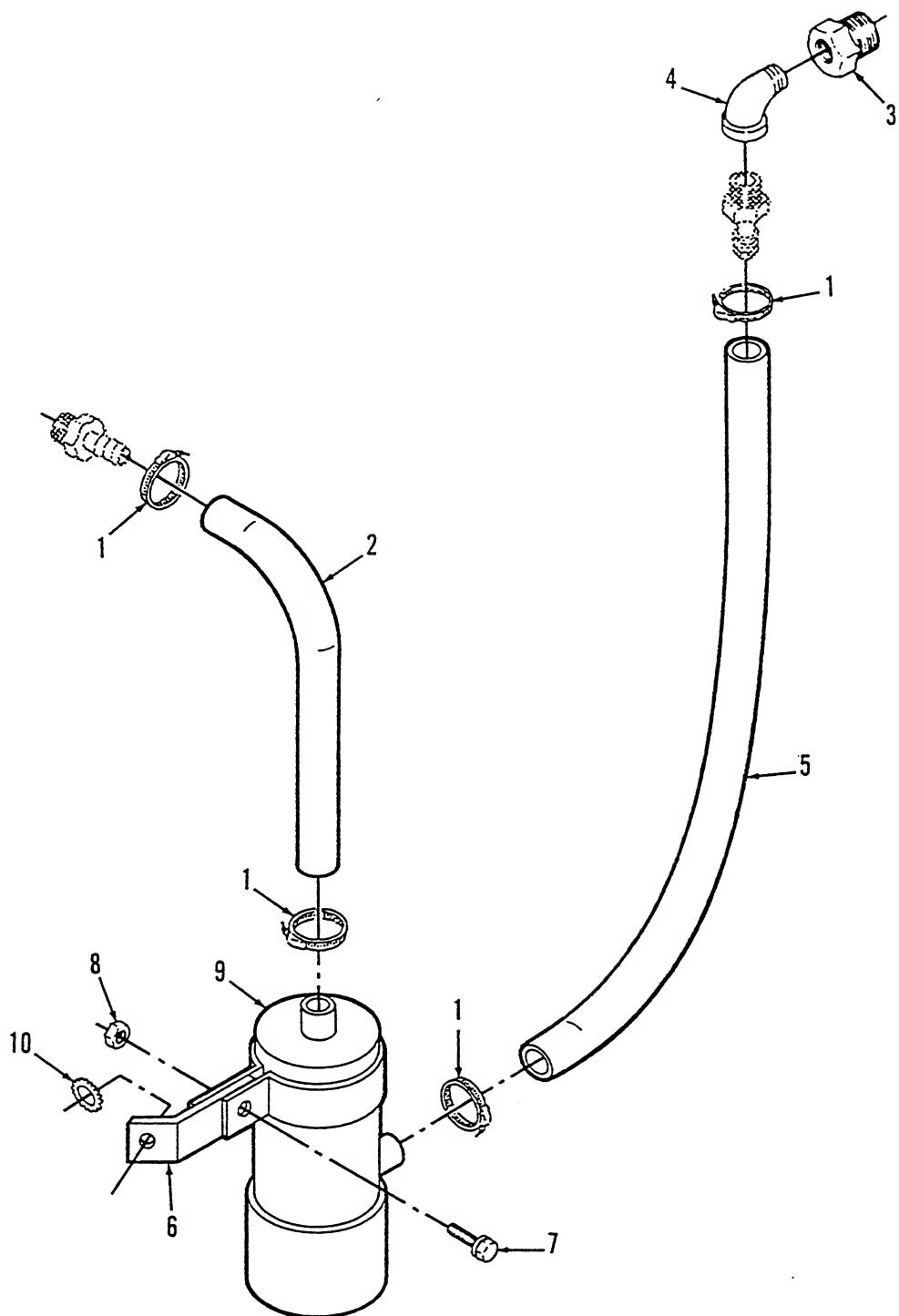
Oil Pressure Switch



201A

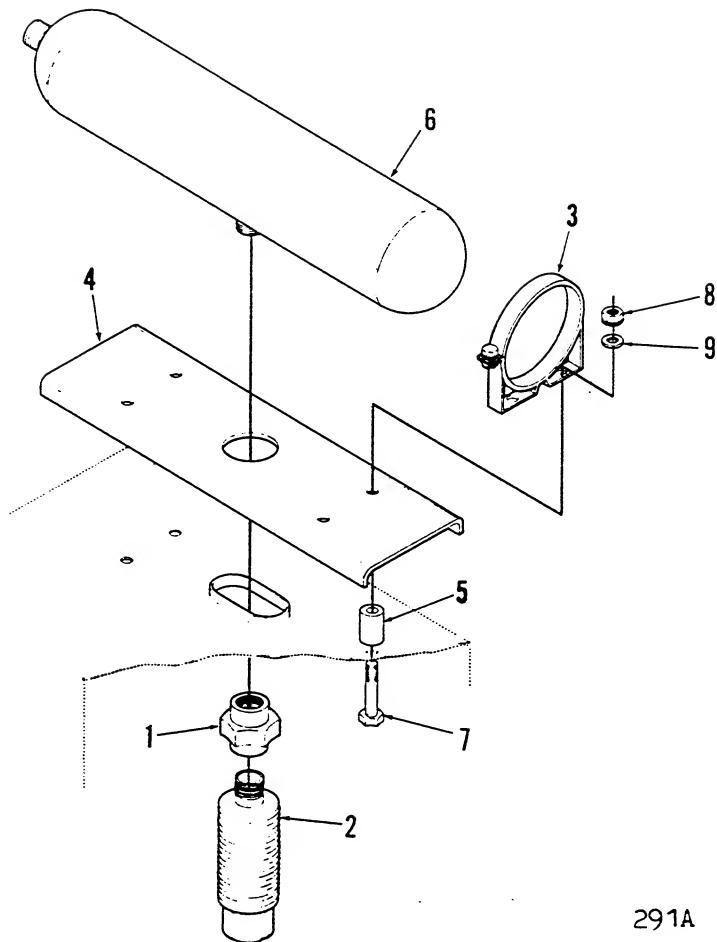
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	193-0244	1	Sender, Oil Pressure (E1)	3	309-0272	1	Switch, Oil Pressure (S5 - Pre-Alarm) Closes at 20 lbs.
2			Switch, Oil Pressure - Closes at 14 lbs. Descending				Descending
	309-0169	1	Spec C and D (S3)	4	505-0059	1	Tee, Pipe (1/8")
	309-0561	1	Spec E (S1)	5	505-0098	1	Nipple, Pipe (1/8" x 3/4")

Engine Tank Heater



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0183	4	Clamp, Hose (5/8")	8	870-0257	1	Nut, Self-Locking - Hex
2	503-1429-01	1	Hose, Flex (5/8")	9			Washer Head (5/16-18)
3	505-0020	1	Bushing, Reducer (3/4 x 1/4")		333-0244-01		Heater, Engine
4	505-0011	1	Elbow, Street (1/4 NPT)		333-0244-03		1500 Watt, 120 Volt
5	503-1429-05	1	Hose, Flex (5/8" x 36")	10	856-0006	1	1500 Watt, 230 Volt
6	130-0755	1	Bracket, Mounting				Washer, EIT (1/4")
7	821-0016	1	Screw, Self-Locking - Hex Washer Head (5/16-18 x 3/4")				

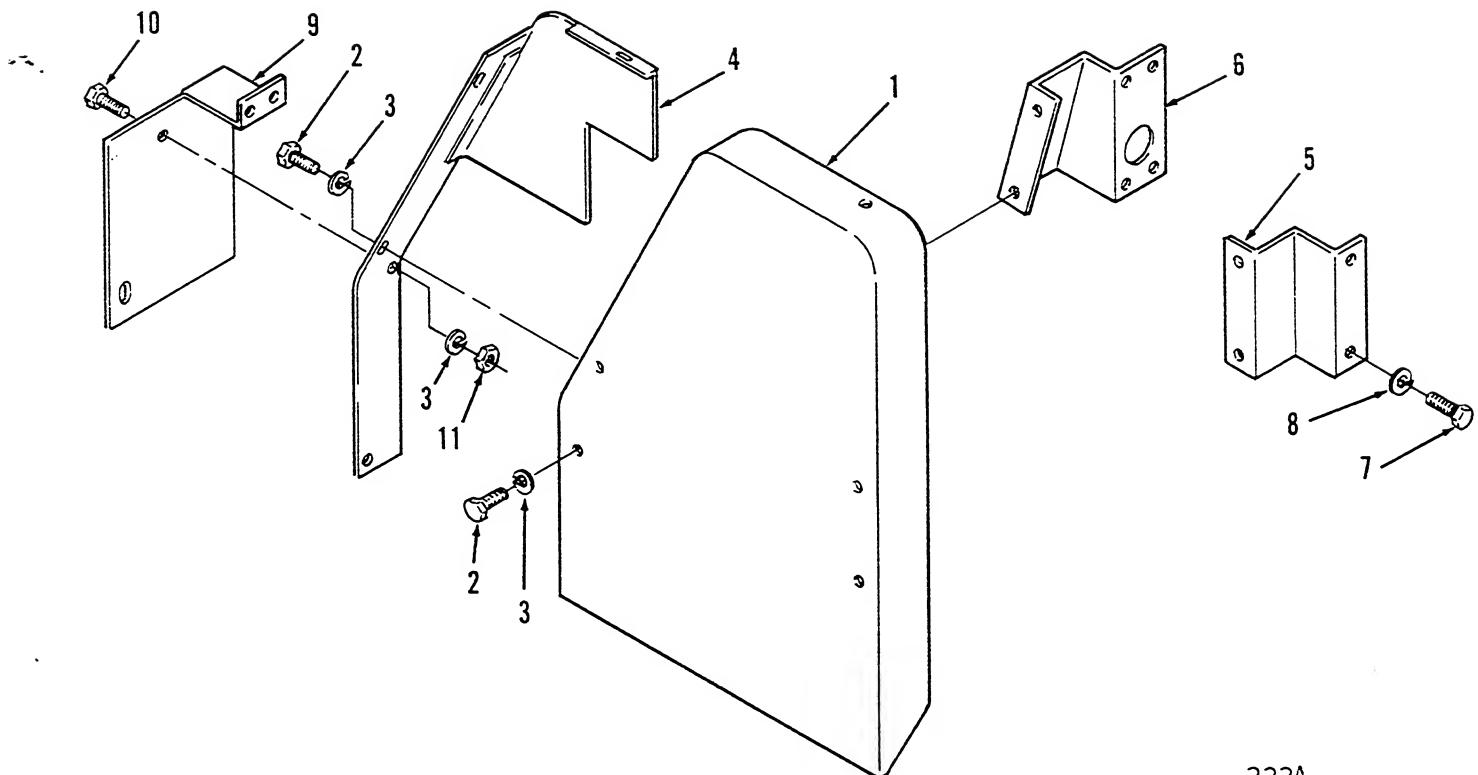
**Muffler
(Housed Set)**



291A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	505-0454	1	Union, Pipe (2" NPT)	7	800-0036	4	Screw, Cap - Hex Head (5/16-18 x 3")
2	155-1936	1	Tube, Exhaust - Flexible	8	870-0257	4	Nut, Self-Locking - Hex Washer Head (5/16-18)
3	140-0752	2	Band, Mounting	9	526-2123	4	Washer, Flat (#10)
4	155-1931	1	Shield, Heat				
5	155-1430	4	Spacer				
6	155-1614	1	Muffler, Exhaust				

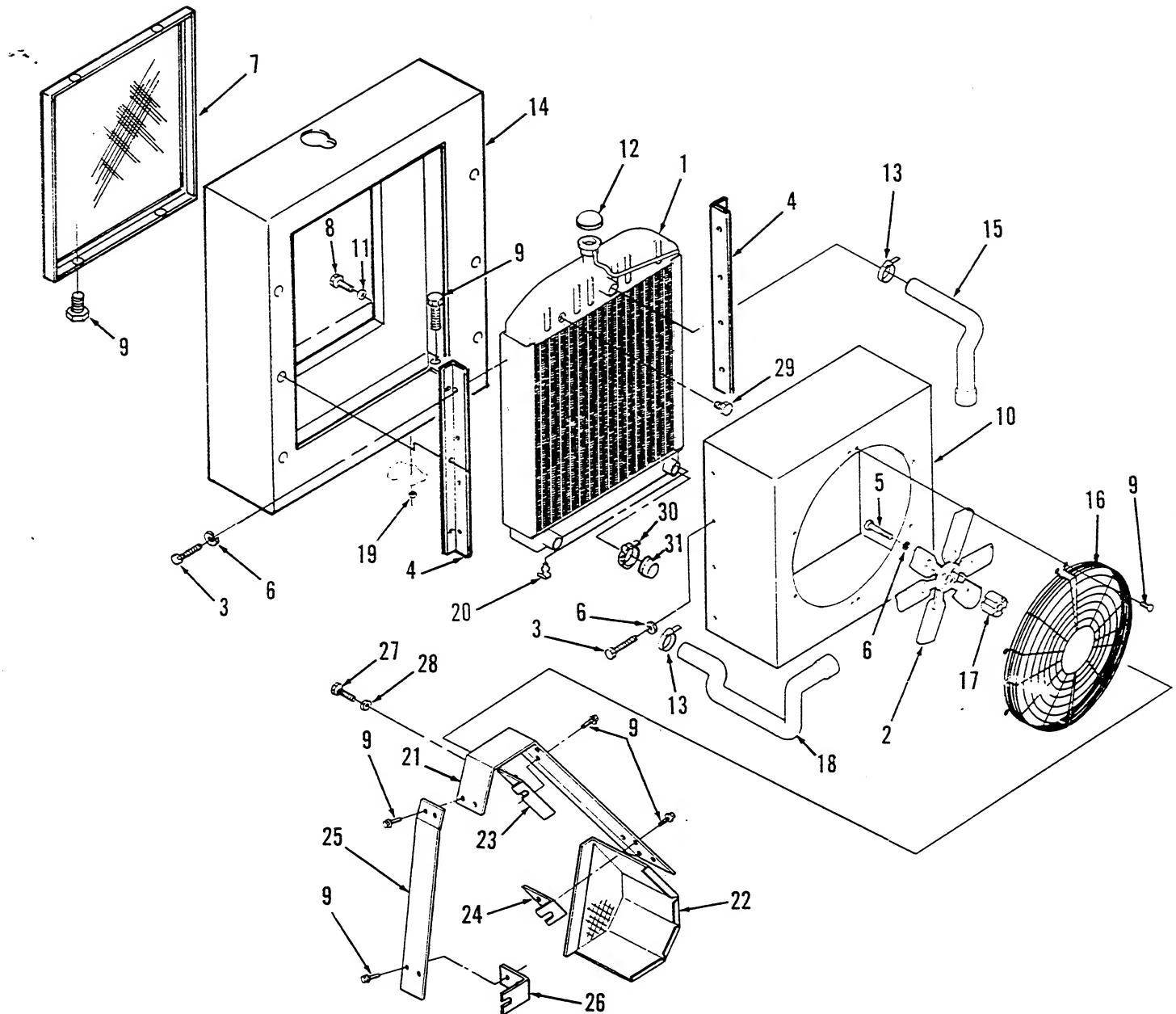
**Belt Guard
(With Remote Radiator)**



222A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	130-3008	1	Panel, Front	7	800-2056	2	Screw, Cap - Hex Head (M8 x 16 MM)
2	800-2029	8	Screw, Cap - Hex Head (M6 x 12 MM)	8	850-2008	2	Washer, Lock - Spring (M8)
3	850-2006	9	Washer, Lock - Spring (M6)	9	191-1598	1	Guard, Alternator
4	130-3007	1	Panel, Side	10	718-1021	1	Screw, Cap - Hex Head (M6 x 20 MM)
5	130-2201	1	Bracket, Pulley Guard (Left Hand)	11	750-1004	1	Nut, Hex (M6)
6	130-2202	1	Bracket, Pulley Guard (Right Hand)				

Cooling System



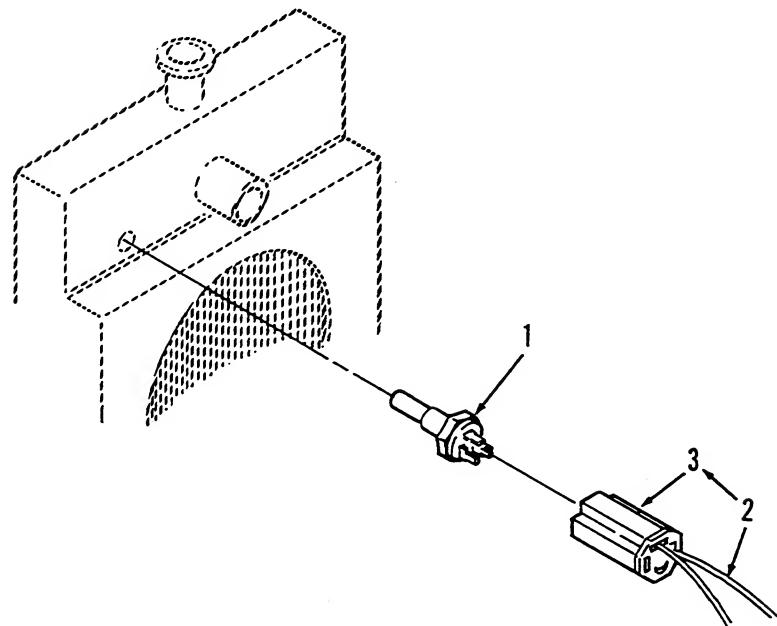
573A

Cooling System

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	130-1818	1	Radiator	16	130-2160	2	Guard, Fan
2	130-1922	1	Fan	17	130-1873	1	Spacer, Fan
3	718-1032	16	Screw, Cap - Hex Head (M8 x 10 MM)	18	503-1070	1	Hose, Radiator - Lower
4	130-2154	2	Bracket, Radiator Mounting	19	870-0212	5	Nut, Lock (1/4-20)
5	718-1047	4	Screw, Cap - Hex Head (M8 x 75 MM)	20	504-0003	1	Valve, Drain
6	850-2008	20	Washer, Lock (M8)	21	191-1540	1	Guard, Alternator Belt
7	130-2150	1	Guard, Radiator	22	191-1539	1	Guard, Alternator Belt
8	800-0003	6	Screw, Cap - Hex Head (1/4-20 x 1/2")	23	191-1542	1	Bracket, Belt Guard
9	821-0010	31	Screw, Cap - Hex Head (1/4-20 x 1/2")	24	191-1543	1	Bracket, Belt Guard
10	130-2158	1	Shroud, Fan	25	191-1546	1	Guard, Alternator Belt
11	526-0021	6	Washer, Flat (1/4")	26	191-1547	1	Bracket, Alternator Belt
12	130-1928	1	Cap, Pressure	27	718-1035	1	Guard
13	503-0365	4	Clamp, Hose	28	526-2100	1	Screw, Machine - Hex Head (M8 x 16 MM)
14	405-3809	1	Housing, Front	29	502-0153	1	Washer, Flat (M8)
15	503-1177	1	Hose, Radiator - Upper	30	503-0429	1	Plug, Hex Head (1/4")
				31	517-0263	1	Clamp
							Cap, Radiator (Lower Hose Fitting)

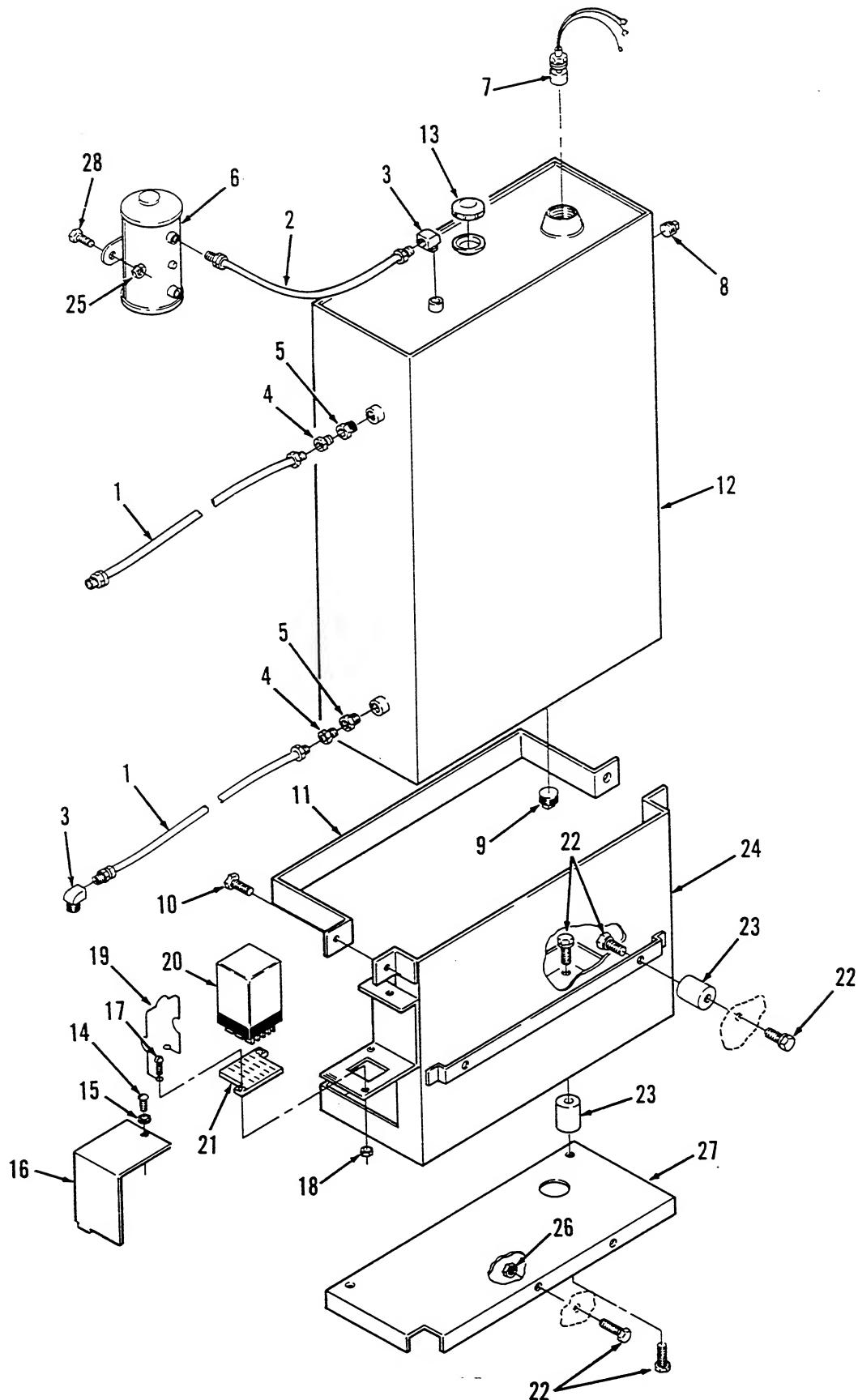
Low Coolant Level Switch

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	193-0322	1	Switch - Coolant Level (S4)
2	338-1691	1	Harness, Wiring (Includes Housing)
3	323-1236	1	Housing, Connector



198A

Day Tank
(Underground Fuel Supply Application)

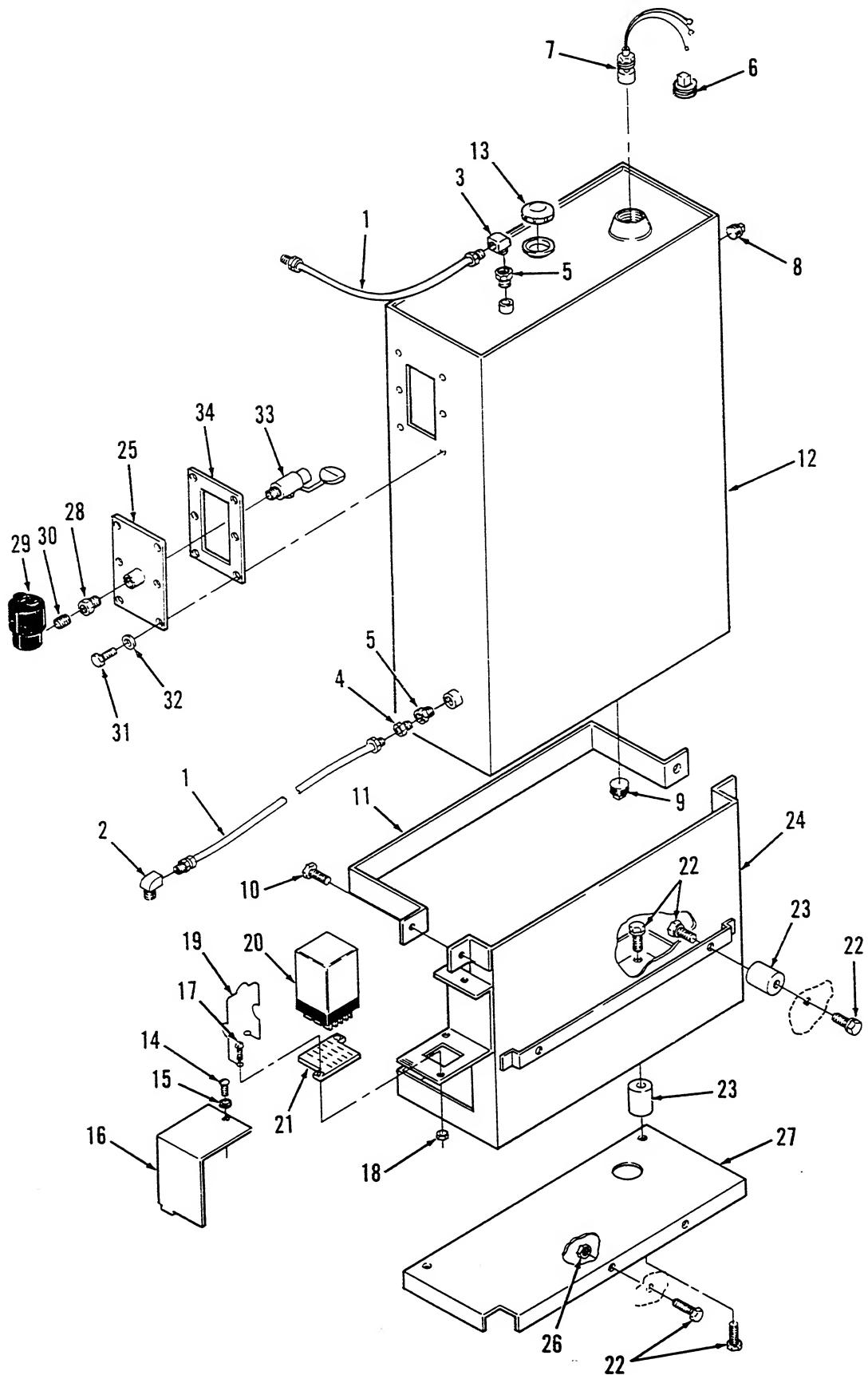


218B

Day Tank
(Underground Fuel Supply Application)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	501-0027	2	Line, Fuel - Flexible (1/8 NPT Male x 1/4 SAE Male Swivel x 48" Lg)	12	415-0445	1	Tank, Fuel - Day (Includes Cap) (3-1/2 Gallons)
2	501-0007	1	Line, Fuel - Flexible (1/8 NPT Male x 1/4 SAE Male Swivel x 24" Lg)	13	159-0007	1	Cap - Fuel Tank
3	502-0041	2	Elbow, Pipe - Street, 90°, Brass-Inverted Male (1/4 NPT)	14	813-0098	1	Screw, Machine - Round Head (#10-32 x 3/8")
4	502-0003	2	Connector, Inverted Male (1/8")	15	850-0030	1	Washer, Lock - Spring (#10)
5	505-0007	2	Bushing, Reducer - Hex (1/4 NPT Male x 1/8 NPT Female)	16	415-0326	1	Cover, Access - Relay
6	149-1828	1	Pump, Fuel (12 VDC)	17	812-0061	2	Screw, Machine - Round Head (#6-32 x 3/8")
7	415-0321	1	Switch, Float - Liquid Level (Includes Mounting Plug)	18	870-1183	2	Nut, Self-locking, Hex - with ET (#6-32)
8	505-0054	1	Plug, Pipe - Square Head (1/4 NPT)	19	307-1157	1	Spring, Holdown - Relay
9	505-0110	1	Plug, Pipe - Square Head (3/8 NPT)	20	307-1058	1	Relay (12 VDC)
10	821-0013	2	Screw, Self-locking - Hex Washer Head (1/4-20 x 1")	21	323-0765	1	Socket, Relay
11	415-0451	1	Strap, Retaining - Tank	22	821-0014	10	Screw, Self-locking - Hex Washer Head (5/16-18 x 1/2")
				23	402-0078	4	Mount, Vibration
				24	159-1120	1	Bracket, Mounting - Fuel Tank
				25	870-0212	2	Nut, Self-locking - Hex Washer Head (1/4-20)
				26	870-0048	2	Nut, Self-locking - Hex Washer Head (5/16-18)
				27	159-1122	1	Plate, Support - Fuel Tank
				28	821-0018	2	Screw, Self-locking - Hex Washer Head (1/4-20 x 5/8")

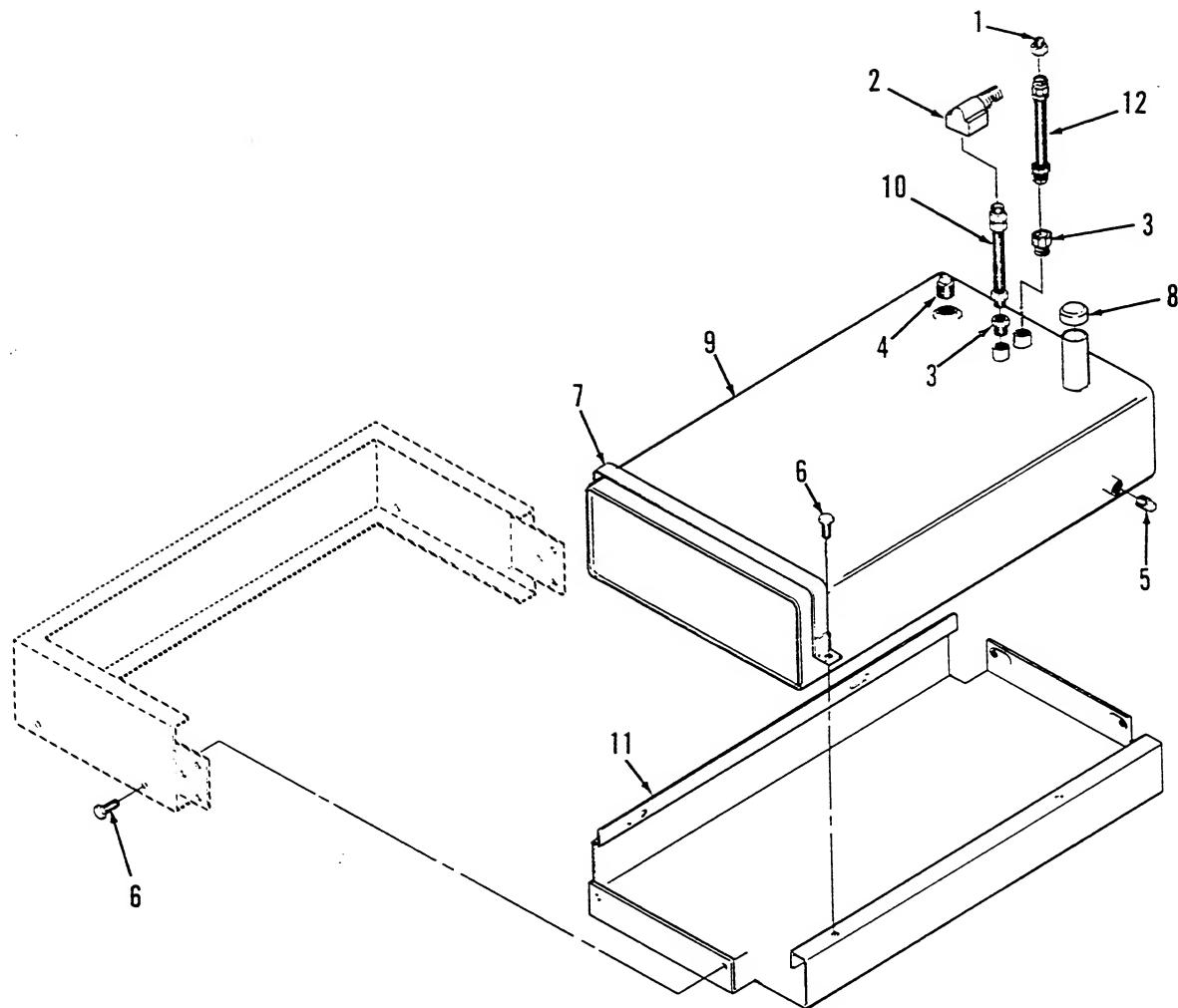
Day Tank
(Overhead Fuel Supply Application)



Day Tank
(Overhead Fuel Supply Application)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	501-0027	2	Line, Fuel - Flexible (1/8 NPT Male x 1/4 SAE Male Swivel x 48" Lg)	16	415-0326	1	Cover, Access - Relay
2	502-0041	1	Elbow, Inverted Male - 90° (1/4")	17	812-0061	2	Screw, Machine - Round Head (#6-32 x 3/8")
3	502-0020	1	Elbow, Pipe - Street, 90°, Brass (1/8")	18	870-1183	2	Nut, Self-locking, Hex - with ET (#6-32)
4	502-0003	1	Connector, Inverted Male (1/8")	19	307-1157	1	Spring, Holdown - Relay
				20	307-1058	1	Relay (12 VDC)
5	505-0007	2	Bushing, Reducer - Hex (1/4 NPT Male x 1/8 NPT Female)	21	323-0765	1	Socket, Relay
6	505-1050	1	Plug, Switch Mounting	22	821-0014	10	Screw, Self-locking - Hex Washer Head (5/16-18 x 1/2")
7	415-0466	1	Switch, Float - Liquid Level	23	402-0078	4	Mount, Vibration
8	505-0054	1	Plug, Pipe - Square Head (1/4 NPT)	24	159-1120	1	Bracket, Mounting - Fuel Tank
9	505-0110	1	Plug, Pipe - Square Head (3/8 NPT)	25	415-0516	1	Plate, Cover - Access
10	821-0013	2	Screw, Self-locking - Hex Washer Head (1/4-20 x 1")	26	870-0048	2	Nut, Self-locking - Hex Washer Head (5/16-18)
11	415-0451	1	Strap, Retaining - Tank	27	159-1122	1	Plate, Support - Fuel Tank
12	415-0543	1	Tank, Fuel - Day (Includes Cap) (3-1/2 Gallons)	28	505-0016	1	Bushing, Reducer (3/8" to 1/8")
13	159-0007	1	Cap - Fuel Tank	29	307-0565	1	Solenoid - 12 VDC
14	813-0098	1	Screw, Machine - Round Head (#10-32 x 3/8")	30	505-0098	1	Nipple, Pipe - Close (1/8" NPT x 3/4")
15	850-0030	1	Washer, Lock - Spring (#10)	31	800-0002	6	Screw, Cap - Hex Head (1/4-20 x 3/8")
				32	526-0063	6	Washer, Flat - Copper (17/64" ID x 7/16 OD x 1/32" Thk)
				33	309-0410	1	Valve, Float
				34	415-0467	1	Gasket - Access Plate

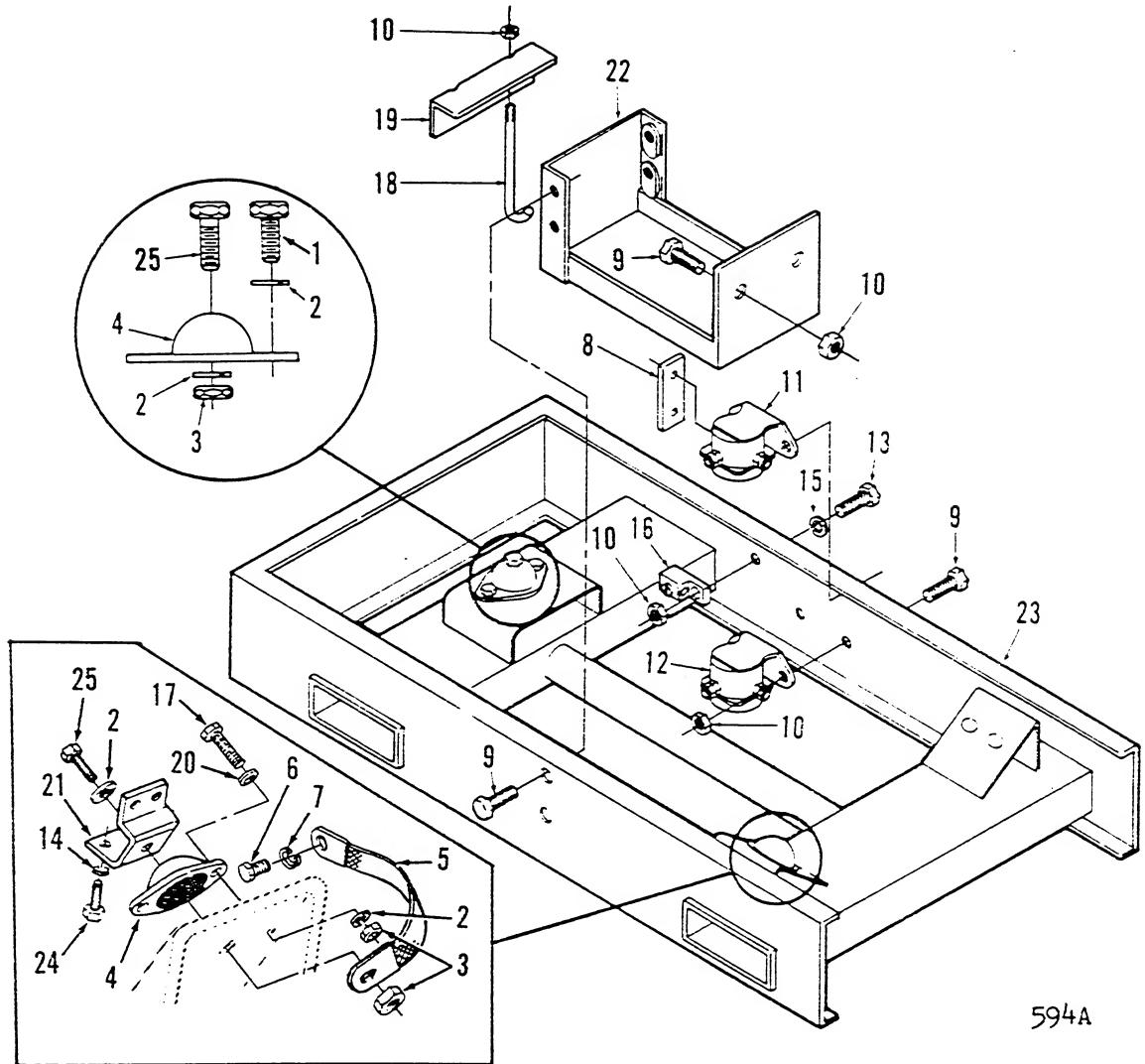
Fuel Tank
(Skid Mounted)



215A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	502-0003	1	Adapter, Pipe - Hex (5/16-24 Female x 1/8 NPT Male)	6	821-0010	6	Screw, Self-locking - Hex Washer Head (1/4-20 x 1/2")
2	502-0041	1	Elbow, Pipe - Street, 90° (5/16-24 Female x 1/4 NPT Male)	7	159-1126	2	Strap, Retaining - Fuel Tank
3	505-0007	2	Bushing, Reducer - Hex (1/4 NPT Male x 1/8 NPT Female)	8	159-0007	1	Cap - Fuel Tank
4	505-0949	1	Plug, Pipe - Square Head (1-1/4 NPT)	9	159-1123	1	Tank, Fuel (8-1/2 Gallon)
5	505-0054	1	Plug, Pipe - Square Head (1/4 NPT)	10	501-0027	1	Line, Fuel - Flexible (1/8 NPT Male x 1/4 SAE Male Swivel x 48" Lg.)
				11	159-1124	1	Tray, Mounting - Fuel Tank
				12	501-0094	1	Line, Fuel - Flexible (1/8 NPT Male x 1/4 SAE Male Swivel x 60" Lg.)

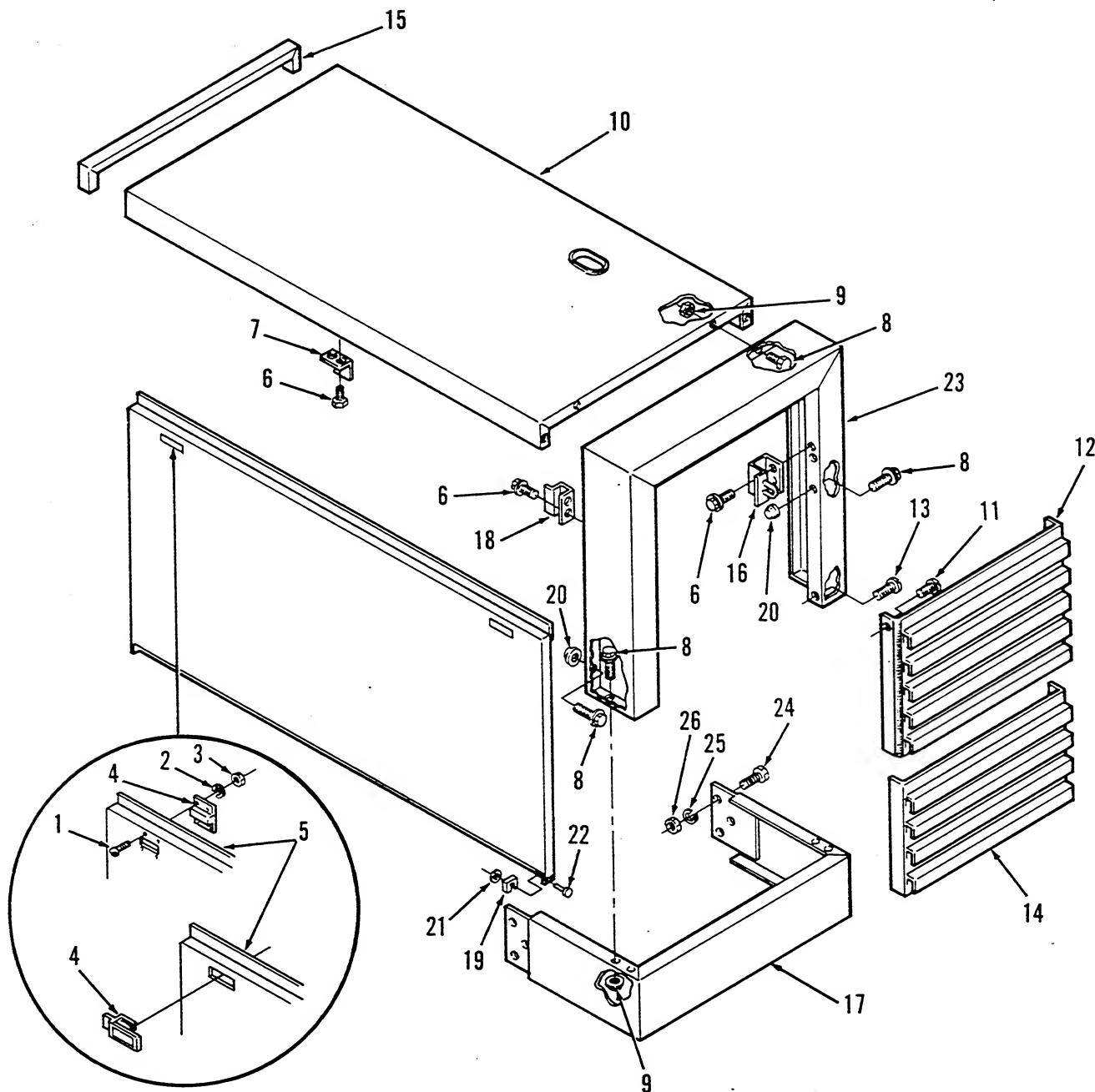
Chassis



594A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0091	2	Screw, Cap - Hex Head 1/2-13 x 1-1/4" (Spec C and D)	12	307-1166	1	Relay, Solenoid - Start (Lower) (K1) (Spec C and D)
	800-0090	2	1/2-13 x 1" (Spec E)	13	821-0013	1	Screw, Self-Locking - Hex Washer Head (1/4-20 x 1")
2	850-0060	9	Washer, Lock - Spring (1/2")	14	850-2012	8	Washer, Lock - Spring (M12)
3	862-0016	7	Nut, Hex (1/2-13)	15	856-0006	1	Washer, Lock - EIT (1/4")
4	402-0466	3	Mount, Vibration	16	332-1473	1	Lug, Solderless
5	337-0090	1	Strap, Ground - Engine	17	800-0091	4	Screw, Cap - Hex Head (1/2-13 x 1-1/4")
6	800-2110	1	Screw, Cap - Hex Head (M12 x 20 MM)	18	416-0813	2	Rod, J Hook (1/4-20)
7	853-2012	1	Washer, Lock - ET (M12)	19	416-0812	1	Bracket, Holddown - Battery
8	332-0602	1	Jumper, Solenoid (Spec C and D)	20	526-0219	4	Washer, Flat (1/2")
9			Screw, Self-Locking - Hex Washer Head (1/4-20 x 1/2")	21	403-1929	2	Bracket, Engine Mounting
	821-0010	8	Spec C and D	22	416-0821	1	Tray, Battery
	821-0010	6	Spec E	23	403-2053	1	Skid
10			Nut, Self-Locking - Hex Washer Head (1/4-20)	24	720-1072	8	Screw, Cap - Hex Head (M12 x 20 MM)
	870-0212	9	Spec C and D	25	800-0091	3	Screw, Cap - Hex Head 1/2-13 x 1-1/4" (Spec C and D)
	870-0212	7	Spec E		800-0090	3	1/2-13 x 1" (Spec E)
11	307-1031	1	Relay, Solenoid - Heater (Upper) (K2)				

Housing



275A

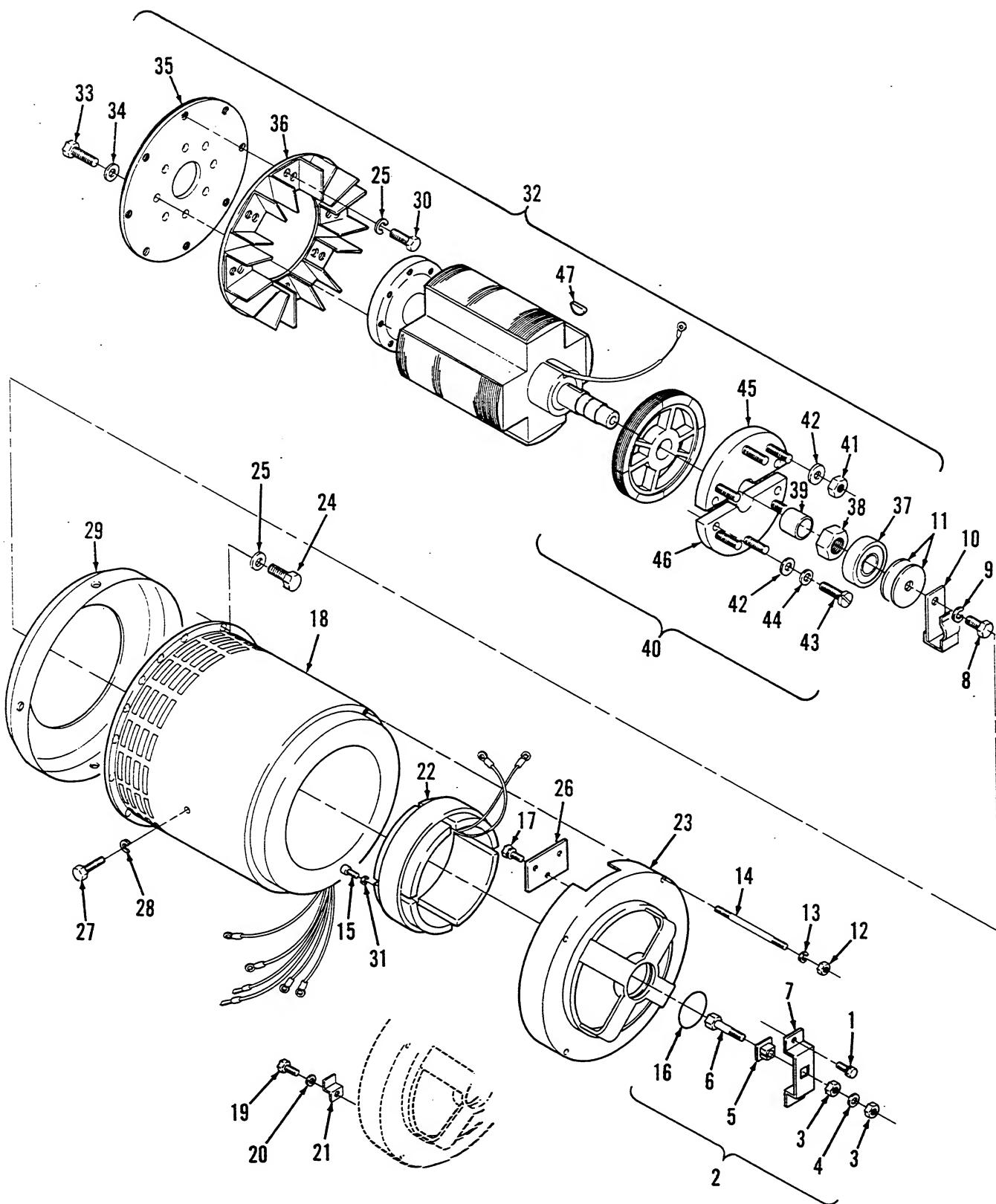
Housing

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	812-0148	16	Screw, Machine - Round Head (1/4-20 x 1/2")	12	405-2677	1	Cover, Control
2	850-0040	16	Washer, Lock - Spring (1/4")	13	812-0148	4	Screw, Machine - Round Head (1/4-20 x 1/2")
3	862-0001	16	Nut, Hex (1/4-20)	14	405-3082	1	Grille
4			Latch, Door	15	895-0195	-	Stripping, Weather - Bulk (Ordered by the foot - 5 foot required)
	406-0369	4	* Begin Spec C Through a Portion of Spec D (With Mounting Holes)	16	406-0491	1	Latch, Cover
	406-0561	4	* Use Began During Spec D (Without Mounting Holes)	17	403-2064	1	Skid, Rear
			Door, Engine	18	406-0493	4	Catch, Door
	405-2823	2	* Begin Spec C Through a Portion of Spec D (With Latch Mounting Holes)	19	405-1872	6	Clip, Door
	405-3306	2	* Use Began During Spec D (Without Latch Mounting Holes)	20	870-0258	6	Nut, Weld (1/4-20)
6	821-0004	14	Screw, Self-locking - Hex Washer Head (10-32 x 5/16")	21	526-0003	12	Washer, Flat (#8)
7	406-0490	2	Latch, Door	22	818-0150	12	Rivet
8	821-0010	18	Screw, Self-locking - Hex Washer Head (1/4-20 x 1/2")	23	405-3070	1	Panel, Rear
9	870-0212	12	Nut, Self-locking - Hex (1/4-20)	24	800-0090	6	Screw, Cap - Hex Head (1/2-13 x 1")
10	405-3060	1	Panel, Top	25	850-0060	6	Washer, Lock - Spring (1/2")
11	813-0098	3	Screw, Machine - Round Head (#10-32 x 3/8")	26	862-0016	6	Nut, Hex (1/2-13)

* - Latches and doors with mounting holes are not
interchangeable with latches and doors without
mounting holes.

w/ metal muffler 405-4006

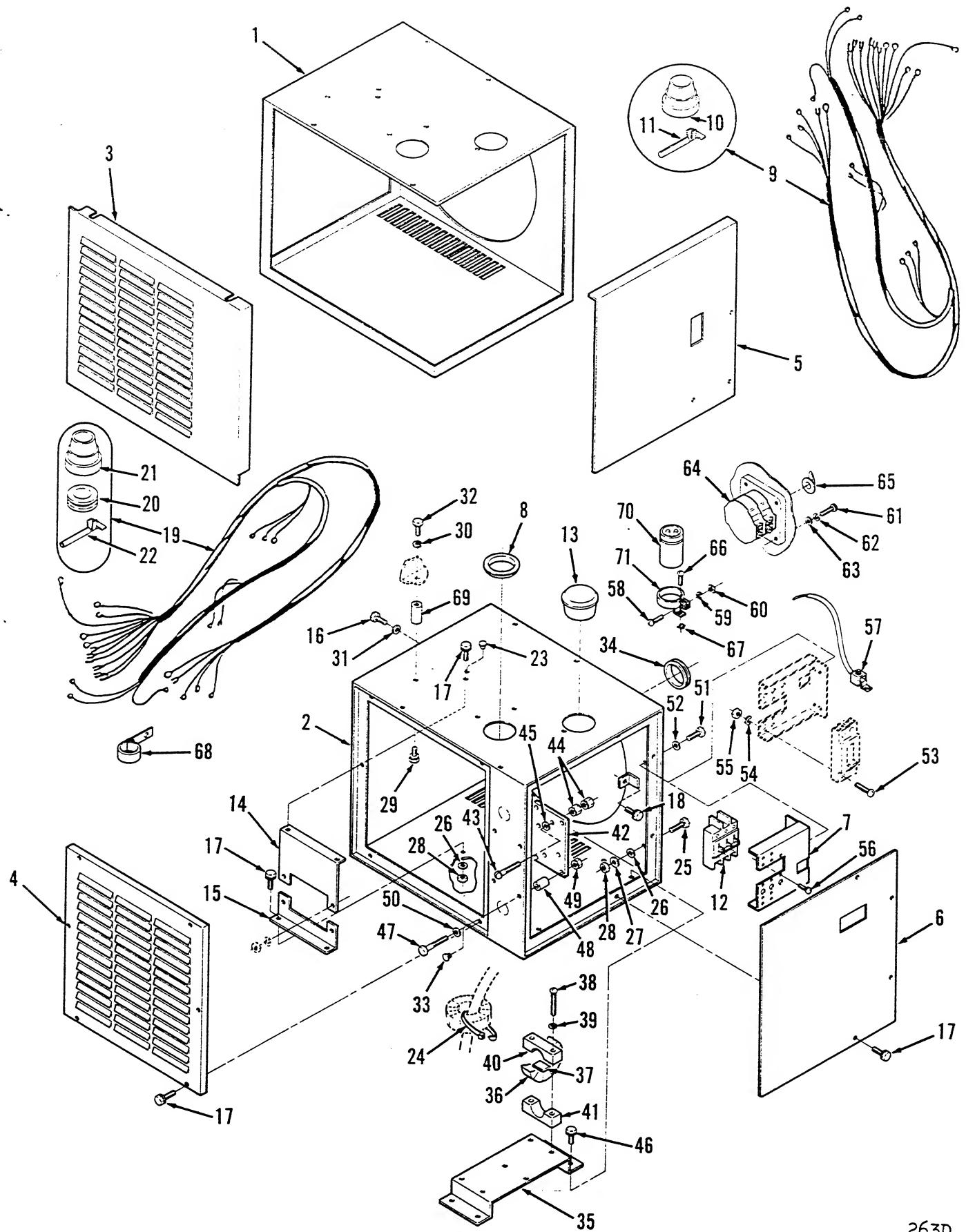
Generator



Generator

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	821-0010	2	Screw, Self-Locking - Hex Washer Head (1/4-20 x 1/2")	25	850-2010	20	Washer, Lock - Spring (M10)
2	150-1446	1	Bracket and Point Assembly (Includes Parts Marked #)	26	232-2418	1	Board, Terminal
3	862-0001	2	#Nut, Hex (1/4-20)	27	718-1019	4	Screw, Cap - Hex Head (M6 x 14MM)
4	853-0013	1	#Washer, Lock - ET (1/4")	28	850-2006	4	Washer, Lock - Spring (M6)
5	870-0250	1	#Nut, Insulating	29	232-2845	1	Baffle, Air
6	150-0723	1	#Point, Contact	30	800-2085	8	Screw, Cap - Hex Head (M10 x 20MM)
7	150-1445	1	#Bracket, Mounting	31	850-0040	4	Washer, Lock - Spring (1/4")
8	800-0051	1	Screw, Cap - Hex Head (3/8-16 x 1-1/4")	32			Rotor Assembly, Generator (Includes Parts Marked *)
9	856-0010	1	Washer, Lock - EIT (3/8")				20.0 DL6
10	150-0717	1	Switch, Overspeed (S3)	201-2955		1	Code 53R
11	526-0077	2	Washer, Flat (3/8")	201-2947		1	Code 515R
12	862-0003	4	Nut, Hex (3/8-16)				25.0 DL6
13	850-0050	4	Washer, Lock - Spring (3/8")	201-2955		1	Code B,3R
14			Stud	201-2947		1	Code 9XR
	520-0055	4	3/8-16 x 4"				Code L,15R
	520-0966	4	3/8-16 x 5.2"	201-2947		1	Standard
15	802-0040	4	Screw, Cap - Socket Head (1/4-20 x 2")	201-2955		1	Extended Stack
				201-3048		1	Environmentally Protected
16	509-0094	1	Seal, "O" Ring				Code 53R
17	815-0194	2	Screw, Tapping - Hex Head With ET Lockwasher (#10-32 x 3/8")	201-2956		1	Code 515R
18			Stator Assembly, Generator (Includes Air Baffle)	201-2956		1	Standard
			20.0 DL6	201-2956		1	Extended Stack
	220-3591	1	Code 53R				30.0 DL6
	220-3607	1	Code 515R	201-2956		1	Code 3AR
			25.0 DL6	201-3050		1	Code B,3R
	220-3533	1	Code B,3R				Standard
	220-3768	1	Code 9XR	201-2955		1	Environmentally Protected
			Code L,15R	201-2955		1	Code 7R
	220-3559	1	Standard				Code 9XR
	220-3560	1	Extended Stack	201-2955		1	Code L,15R
	220-3587	1	Environmentally Protected	201-2956		1	Standard
				201-3049		1	Extended Stack
	220-3590	1	Code 53R				Environmentally Protected
			Code 515R	201-3050		1	Extended Stack and Environmentally Protected
	220-3608	1	Standard				
	220-3609	1	Extended Stack	33	805-0025	8	*Bolt, Hex Head - Slotted, Grade 8 (7/16-14 x 3/4")
			30.0 DL6	34	526-0249	8	*Washer, Flat - Hardened (15/32" ID x 1" OD x 1/8" Thk)
	220-4086	1	Code 3AR				
			Code B,3R	35	232-2843	1	*Disk, Drive
	220-3532	1	Standard	36	205-0132	1	*Fan, Generator
	220-3998	1	Environmentally Protected	37	510-0112	1	*Bearing, Ball
				38	870-0284	1	*Nut, Self-Locking Hex (1-1/8-12)
	220-4102	1	Code 7R	39	232-2398	1	*Spacer, Bearing
	220-3769	1	Code 9XR	40			*Rotor Assembly, Exciter (Includes Parts Marked +)
			Code L,15R				Standard
	220-3560	1	Standard	201-2152		1	Environmentally Protected
	220-3561	1	Extended Stack	201-2298		1	
	220-3588	1	Environmentally Protected	41	870-0131	8	+Nut, Self-Locking - Hex With ET Lockwasher (#10-32)
				42	526-0008	12	+Washer, Flat (#10)
	220-3589	1	Extended Stack and Environmentally Protected	43	813-0100	4	+Screw, Machine - Round Head (#10-32 x 1/2")
19	800-0004	4	Screw, Cap - Hex Head (1/4-20 x 5/8") Exciter	44	853-0008	4	+Washer, Lock - ET (#10)
			Stator Mounting (Early Models)	45	358-0069	1	+Rectifier Assembly - Positive
20	853-0013	4	Washer, Lock - ET (1/4") Exciter Stator Mounting (Early Models)	46	358-0070	1	+Rectifier Assembly - Negative
21	232-2584	4	Clip, Retaining - Exciter Stator Mounting (Early Models)	47	515-0094	1	+Key - Exciter Stator
22			Stator, Exciter Standard				# - Parts Included in 150-1446 Bracket and Point Assembly
	220-2010	1	Environmentally Protected				* - Parts Included in Generator Rotor Assemblies
23	220-2309	1					+- Parts Included in Exciter Rotor Assemblies
24	211-0349	1	Bell, End				
	800-2087	12	Screw, Cap - Hex Head (M10 x 30 MM)				

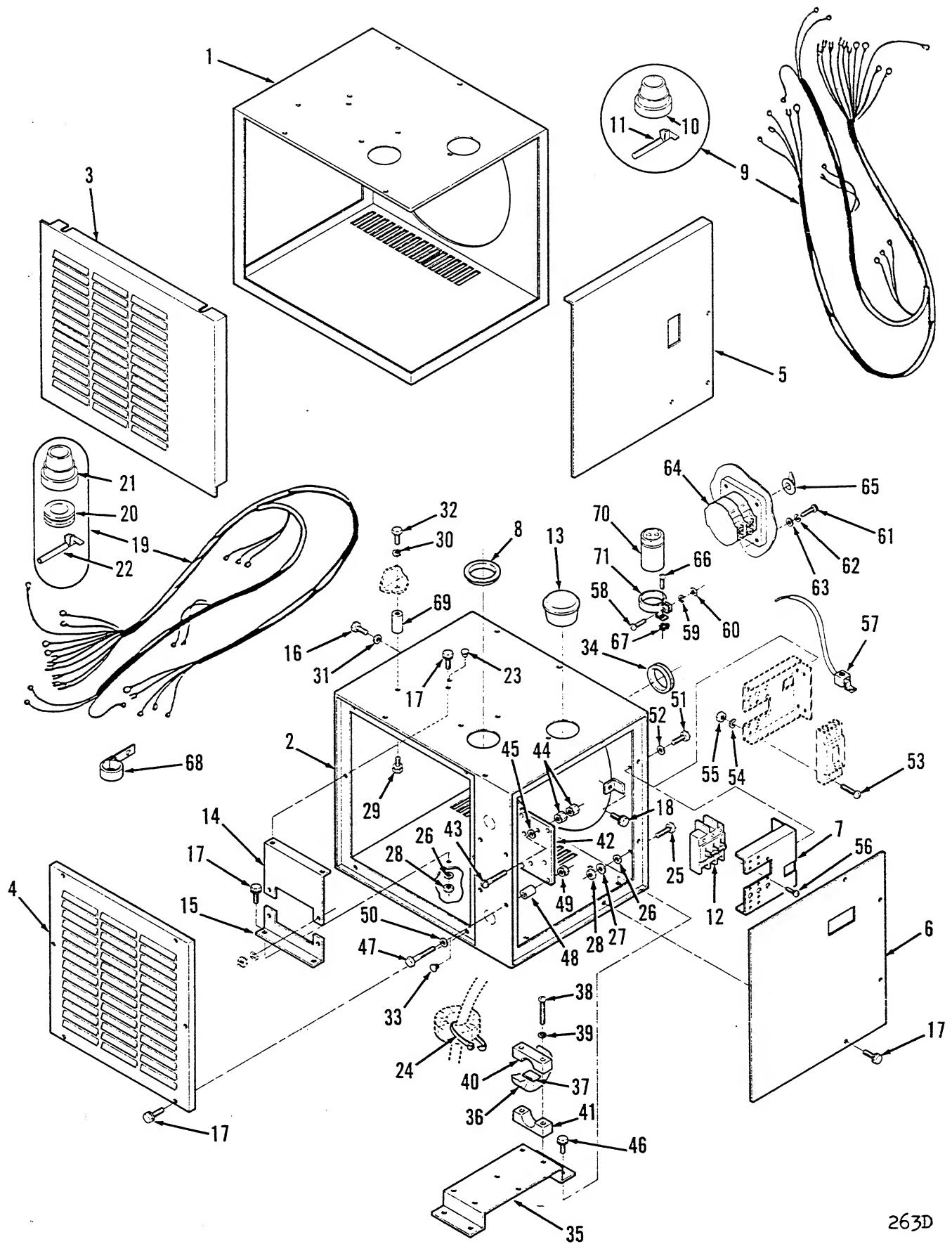
Output Box
(Spec C and D)



Output Box
(Spec C and D)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	301-7381	1	Box, Output - Early Portion of Spec C (Corner brace is part of the grille)	10	323-1136	1	Plug, Circular (14 Pin) (P2)
2	301-7903	1	Box, Output	11	323-1228	11	Pin, Male
	301-7903	1	Late Portion of Spec C (Corner brace is part of output box)	12			Breaker, Circuit (CB4 or CB5) 50 Hertz
3	301-7336	1	Spec D	320-1061		1	Voltage Code 53R - 125 Amp, 240 Volt
	301-7336	1	Grille - Early Portion of Spec C (Corner brace is part of grille)	320-0638		1	Voltage Code 515R
4	301-7899	1	Grille	320-0645		1	40 Amp, 480 Volt
	301-7899	1	Late Portion of Spec C (Corner brace is part of output box)	320-0642		1	50 Amp, 480 Volt
5	301-7899	1	Spec D	320-1440		1	90 Amp, 240 Volt
	301-7335	1	Cover - Early Portion of Spec C (With 90° bend)	320-1061		1	60 Hertz
	301-7335	1	Without Circuit Breaker	320-1435		1	Voltage Code 3R
			Opening	320-0638		1	125 Amp, 240 Volt
			With Circuit Breaker	320-0645		1	125 Amp, 240 Volt
			Opening	320-0384		1	(With Shunt Trip)
	301-7516	1	Use with Westinghouse and General Electric Circuit Breakers	320-0647		1	Voltage Code 7R - 60 Amp, 480 Volt (With Shunt Trip)
	301-7515	1	Use with Heineman Circuit Breakers	320-0700		1	Voltage Code 15R
6	301-7901	1	Cover	320-0701		1	40 Amp, 480 Volt
			Late Portion of Spec C (Without 90° Bend)	320-0457		1	50 Amp, 480 Volt
			Without Circuit Breaker	320-1049		1	60 Amp, 480 Volt
			Opening	320-1283		1	70 Amp, 240 Volt
	301-7941	1	With Circuit Breaker	320-1062		1	80 Amp, 240 Volt
			Opening	320-0344		1	100 Amp, 240 Volt
	301-7941	1	Use with Westinghouse and General Electric Circuit Breakers	13	517-0190	1	100 Amp, 240 Volt (With Shunt Trip)
	301-7942	1	Use with Heineman Circuit Breakers	14	301-7360	1	125 Amp, 240 Volt
	301-7901	1	Spec D	15	301-7361	1	150 Amp, 240 Volt
			Without Circuit Breaker	16	815-0567	2	175 Amp, 240 Volt
			Opening	17	821-0010	14	Plug, Plastic - 3-1/2" Hole
	301-7941	1	With Circuit Breaker	18	815-0236	1	Bracket - Upper
			Opening	19	338-1649	1	Bracket - Lower
	301-7941	1	Use with Westinghouse and General Electric Circuit Breakers	20	508-0258	1	Screw, Self-Tapping - Hex Head (5/16-18 x 1-1/4")
	301-7942	1	Use with Heineman Circuit Breakers	21	323-1134	1	Screw, Self-Locking - Hex Washer Head (1/4-20 x 1/2")
7	301-7572	1	Bracket, Mounting - Circuit Breaker	22			Screw, Self-Tapping - Hex Head (5/16-18 x 5/8")
8	508-0257	1	Grommet, Plastic - 3-1/2" Hole	23	323-1192	4	Harness, Wiring - Engine to Control (Includes Grommet, Plug and Sockets)
9	338-1647	1	Harness, Wiring - Generator to Control (Includes Plug and Pins)	24	323-1195	10	Grommet, Rubber - 1-1/2" Hole
				23	517-0169	4	Plug, Circular (16 Pin) (P1)
				24	332-0941	3	Socket, Female
							14-12 Gauge Wire
							18-14 Gauge Wire
							Tie, Cable

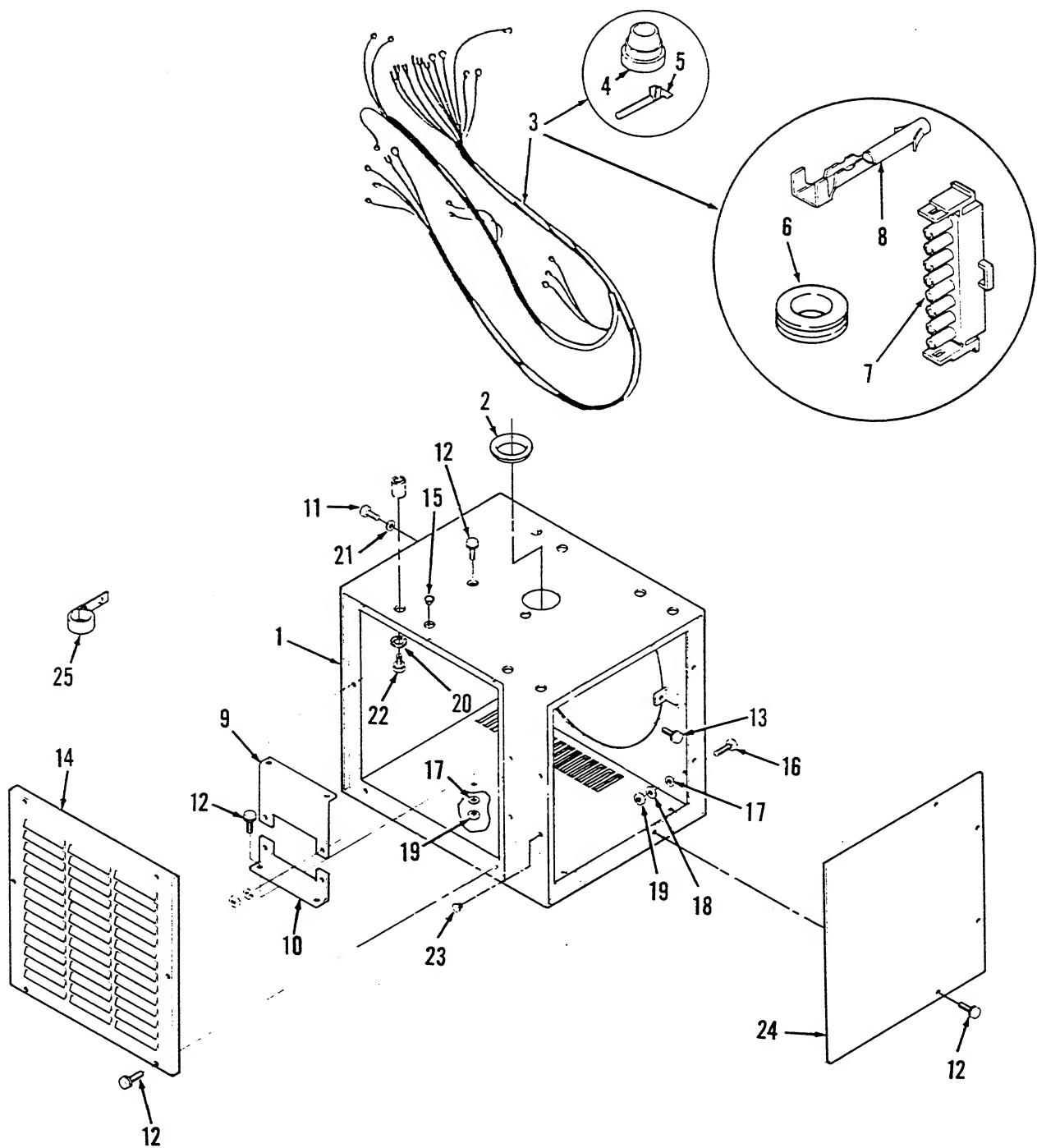
Output Box
(Spec C and D)



Output Box
(Spec C and D)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
25	800-0007	1	Screw, Cap - Hex Head (1/4-20 x 1") Grounding Stud	45	854-0014	3	Washer, Lock - IT (1/4")
26	856-0006	4	Washer, Lock - EIT (1/4")	45	854-0014	4	Single Phase Sets
27	526-0018	3	Washer, Flat (1/4")	46	821-0009	4	Three Phase Sets
28	862-0001	3	Nut, Hex (1/4-20)	47	800-0010	4	Screw, Self-Locking - Hex
29	821-0014	4	Screw, Self-Locking - Hex Washer Head (5/16-18 x 1/2")	47	800-0010	4	Washer Head (1/4-20 x 3/8")
30	850-0045	4	Washer, Lock - Spring (5/16")	48	332-1348	4	Screw, Cap - Hex Head
31	526-0115	2	Washer, Flat (5/16")	49	870-0212	4	(1/4-20 x 3/4")
32	800-0024	4	Screw, Cap - Hex Head (5/16-18 x 1/2")	50	854-0014	4	Spacer
33	517-0045	4	Plug, Dot Button - 9/32" Hole (Output boxes without terminal blocks)	51	800-0003	2	Nut, Self-Locking (1/4-20)
34	508-0055	1	Grommet, Rubber - 1-3/4" Hole	52	850-0040	2	Washer, Lock - IT (1/4")
35	301-8157	1	Bracket, Mounting	53	812-0094	4	Screw, Machine - Round Head
36			Transformer, Current (Ratio 75/5, 1VA) (CT21,22,23)	54	850-0025	4	(#8-32 x 3-5/8")
	302-0076	2	Single Phase Sets	55	860-0008	4	Washer, Lock - Spring (#8)
	302-0076	3	Three Phase Sets	56	812-0063	6	Nut, Hex (#8-32)
37			Shim	57	226-3423	6	Screw, Machine - Round Head
	302-0253	4	Single Phase Sets	58	812-0078	2	(#6-32 x 1/2")
	302-0253	6	Three Phase Sets	59	850-0025	2	Lead, Generator Output
38			Screw, Machine - Round Head	60	861-0007	2	Extension
	813-0110	4	(#10-32 x 2")	61	812-0153	4	Screw, Machine - Round Head
	813-0110	6	Single Phase Sets	62	850-0040	4	(#8-32 x 7/16")
39	854-0010	4	Three Phase Sets	63	526-0052	4	Washer, Lock - Spring (#8)
	854-0010	6	Washer, Lock - IT (#10)	64	308-0770	1	Washer, Flat (1/4")
40			Single Phase Sets	65	303-0218	1	Switch, Tap - Dual Phase
	302-0235	2	Three Phase Sets	66	815-0166	4	Selector (Includes Knob and
	302-0235	3	Clamp - Lower	67	870-0131	4	Mounting Hardware)
41	302-0236	2	Single Phase Sets	68	332-2634	1	Knob
	302-0236	3	Three Phase Sets	69	402-0070	4	Screw, Machine - Fillister
42	332-2653	1	Block, Terminal	70	356-0090	4	Head (#10-32 x 1")
43			Screw, Machine - Round Head	71	356-0102	2	Nut, Hex - ET (#10-32)
	812-0160	1	1/4-20 x 2-1/2"				Clamp, Insulated - DC Wiring
			1/4-20 x 2"				Harness
	812-0158	2	Single Phase Sets				Dampener, Vibration
	812-0158	3	Three Phase Sets				Capacitor (1300 MFD) Used
44	870-0212	6	Nut, Self-Locking (1/4-20)				With Switching Voltage
	870-0212	8	Single Phase Sets				Regulator (C1)
			Three Phase Sets				Clamp, Mounting

Output Box
(Spec E)



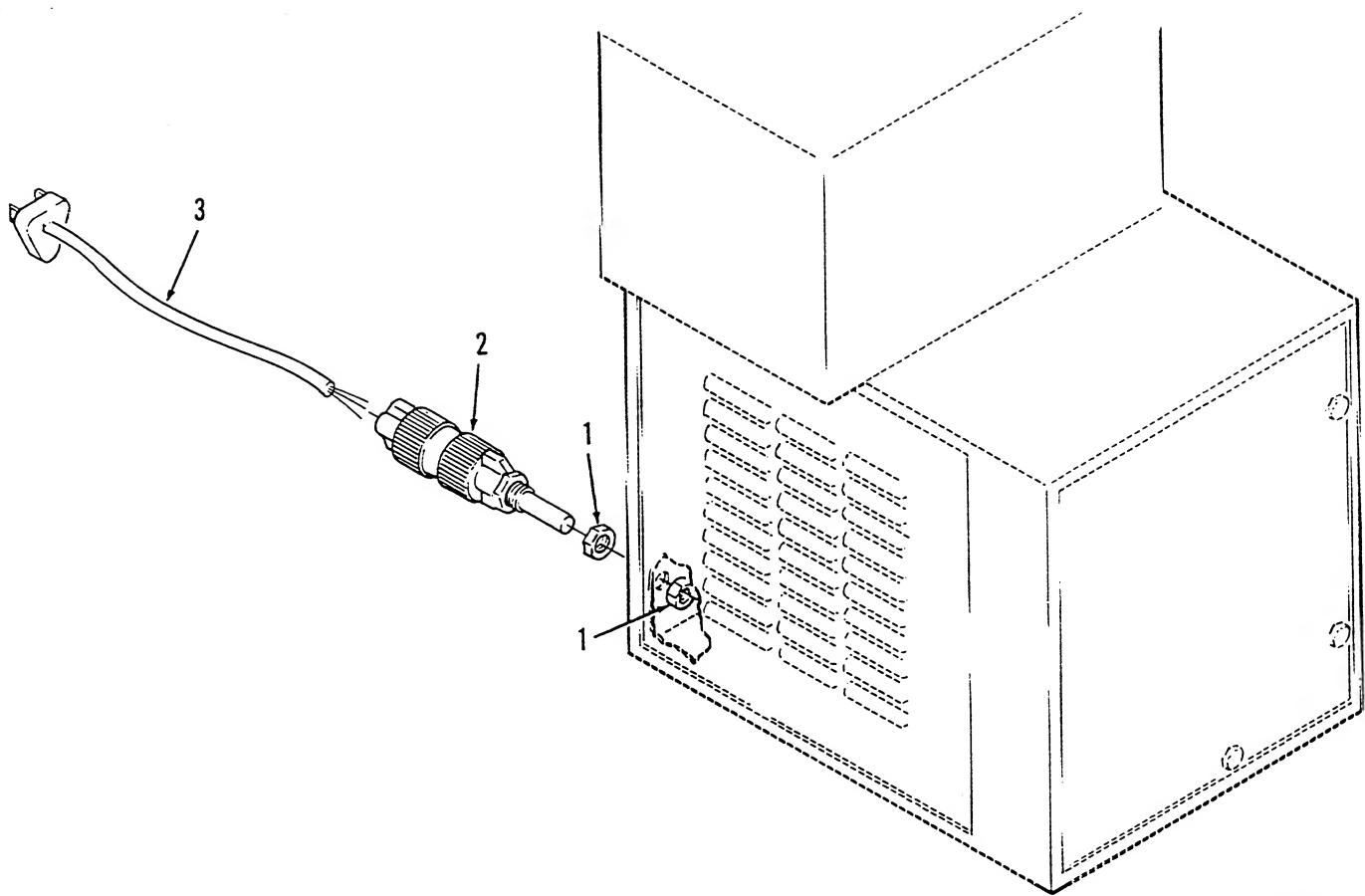
584A

Output Box
(Spec E)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	319-0425	1	Box, Output	13	815-0236	1	Screw, Self-Tapping - Hex Head (5/16-18 x 5/8")
2	508-0257	1	Grommet, Plastic - 3-1/2" Hole	14	301-7899	1	Grille
3	338-2327	1	Harness, Wiring	15	517-0169	4	Plug, Plastic - 3/8" Hole
	338-2329	1	Generator to Control (Includes Plug and Pins)	16	800-0007	1	Screw, Cap - Hex Head (1/4-20 x 1") Grounding Stud
	323-1136	1	Engine to Control (Includes Parts Marked *)	17	856-0006	4	Washer, Lock - EIT (1/4")
4	323-1228	11	Plug, Circular (14 Pin) (P2)	18	526-0018	3	Washer, Flat (1/4")
5	508-0258	1	*Grommet, Rubber	19	862-0001	3	Nut, Hex (1/4-20)
6	323-1304	1	*Housing, Connector	20	850-0045	4	Washer, Lock - Spring (5/16")
	323-1306	1	6 Place (J2)	21	526-0115	2	Washer, Flat (5/16")
8	323-1200	12	8 Place (J1)	22	800-0024	4	Screw, Cap - Hex Head (5/16-18 x 1/2")
9	301-7360	1	*Socket, Female	23	517-0045	4	Plug, Dot Button - 9/32" Hole
10	301-7361	1	Bracket - Upper	24	301-7901	1	Cover
11	815-0567	2	Bracket - Lower	25	332-2634	3	Clamp, Insulated - DC Wiring Harness
12	821-0010	14	Screw, Self-Tapping - Hex Head (5/16-18 x 1-1/4")				
			Screw, Self-Locking - Hex Washer Head (1/4-20 x 1/2")				

* - Parts Included in 338-2329 Wiring Harness.

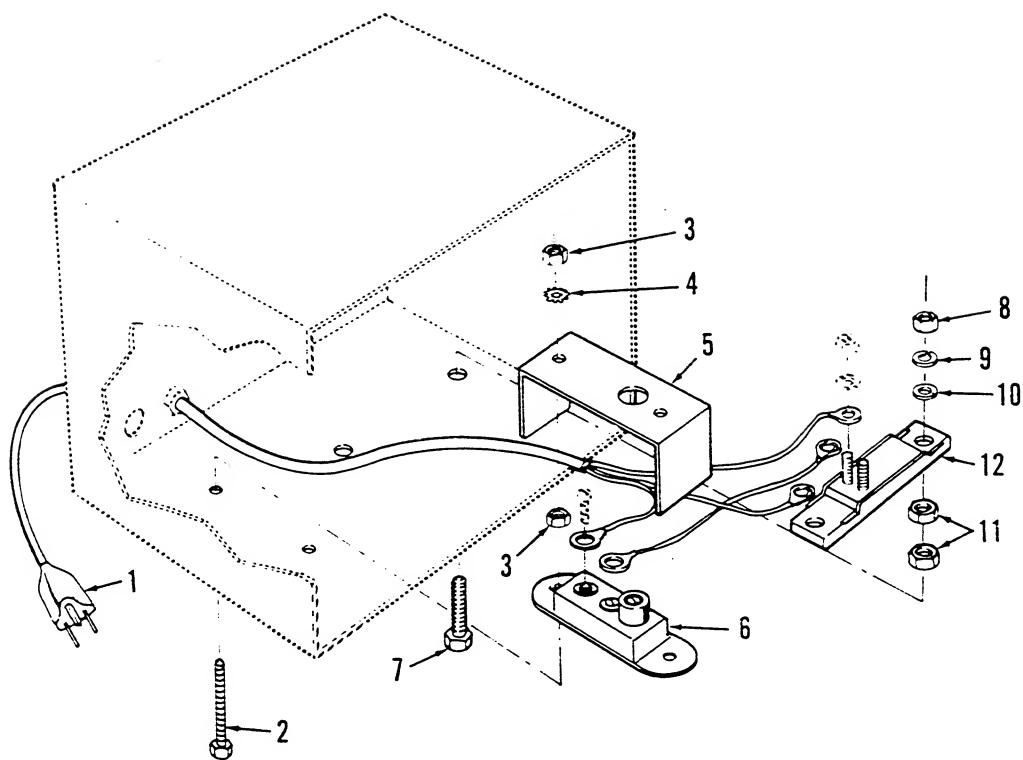
Generator Heater



225A

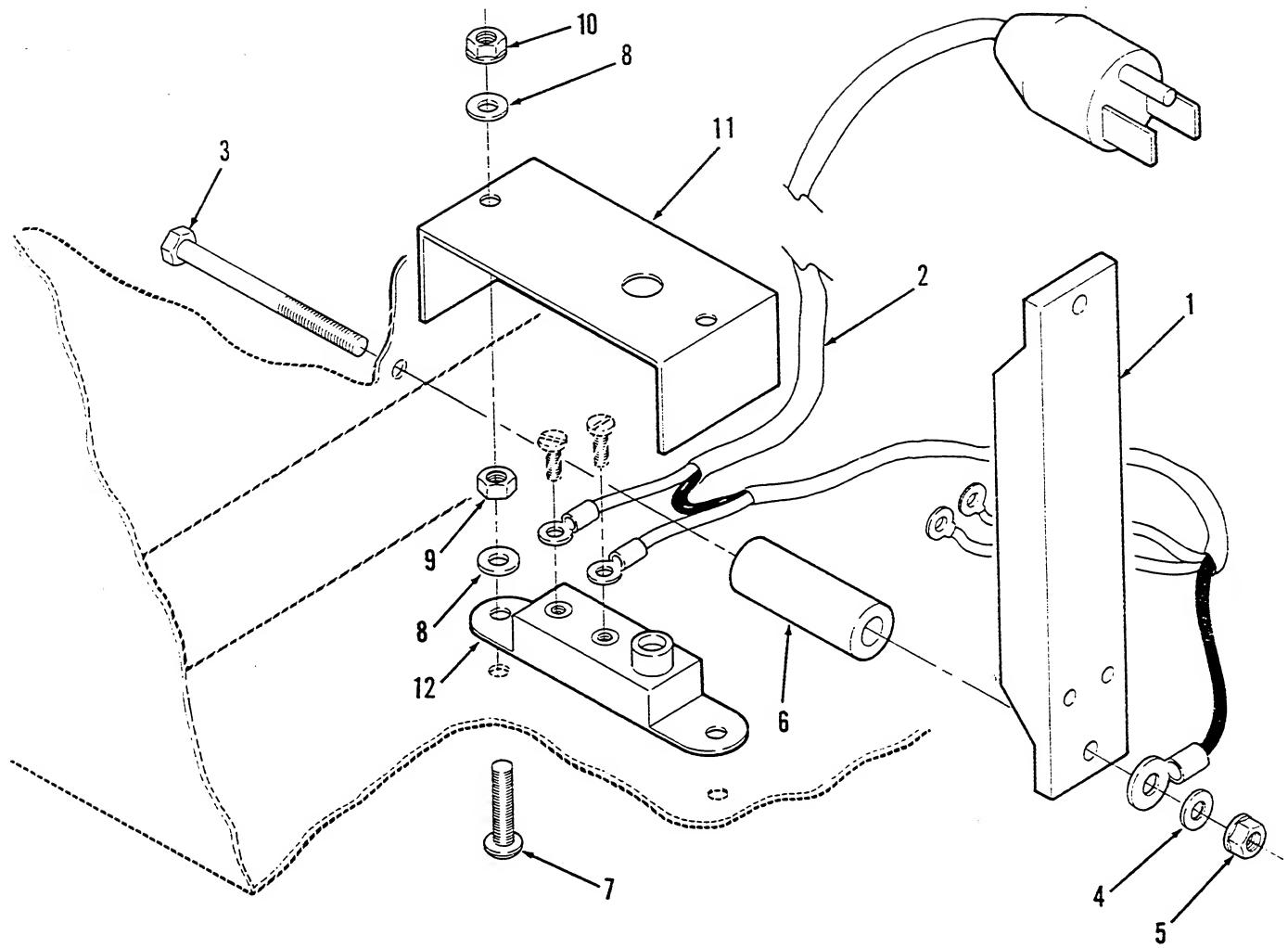
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	331-0041	2	Nut, Hex - Special
2	333-0157	1	Heater, Electrical
3	333-0228	1	Cord, Heater (6')

Control Heater
(Spec C and D)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	335-0110	1	Cable, Electrical (3 Wire)	8	862-0001	2	Nut, Hex (1/4-20)
2	812-0090	2	Screw, Machine - Round Head (#6-32 x 2-1/4")	9	850-0040	2	Washer, Lock - Spring (1/4)
3	860-0006	4	Nut, Hex (#6-32)	10	526-0052	2	Washer, Flat (17/64" ID x 9/16" OD x 1/16" Thk)
4	856-0001	2	Washer, Lock - EIT (#6)	11	862-0015	4	Nut, Hex (5/16-18) - Used As Spacers
5	301-1886	1	Cover, Thermostat	12	333-0151	1	Heater - 75 Watt, 120 VAC; 300 Watt, 240 VAC
6	309-0128	1	Thermostat - Adjustable				
7	800-0007	2	Screw, Cap - Hex Head (1/4-20 x 1")				

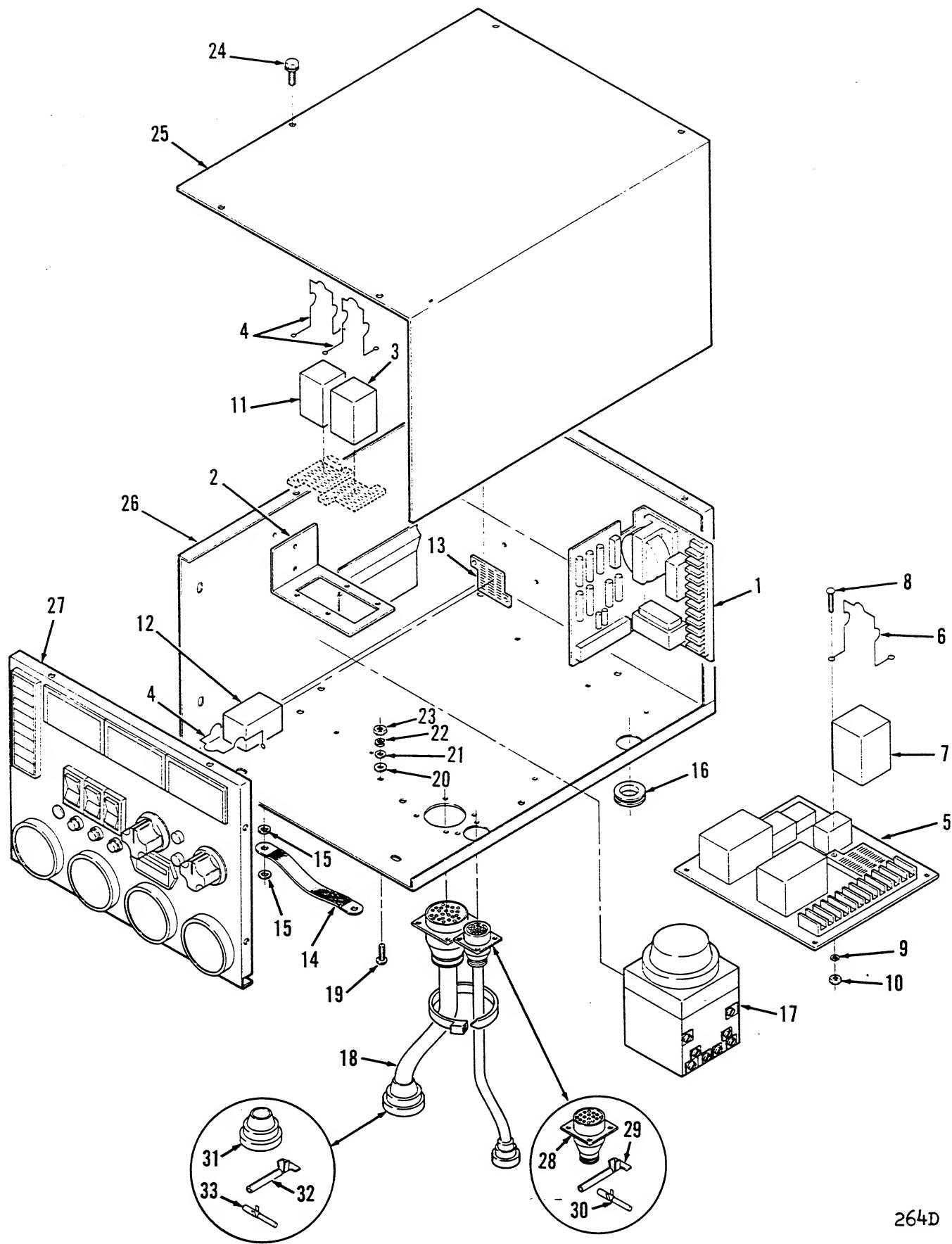
Control Heater
(Spec E)



574B

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	333-0151	1	Heater (HR1)	6	130-1107	2	Spacer
2	335-0161	1	Cable	7	812-0070	2	Screw, Machine - Round Head (#6-32 x 1-1/4")
3	800-0034	2	Screw, Cap - Hex Head (5/16-18 x 2-1/4")	8	854-0006	4	Washer, Lock - IT (#6)
4	526-0113	2	Washer, Flat (11/32" ID x 1" OD x 3/32" Thk)	9	860-0006	2	Nut, Hex (#6-32)
5	870-0257	2	Nut, Self-Locking - Hex Head (5/16-18)	10	870-0183	2	Nut, Hex - With ET (#6-32)
				11	301-1886	1	Cover
				12	309-0128	1	Thermostat

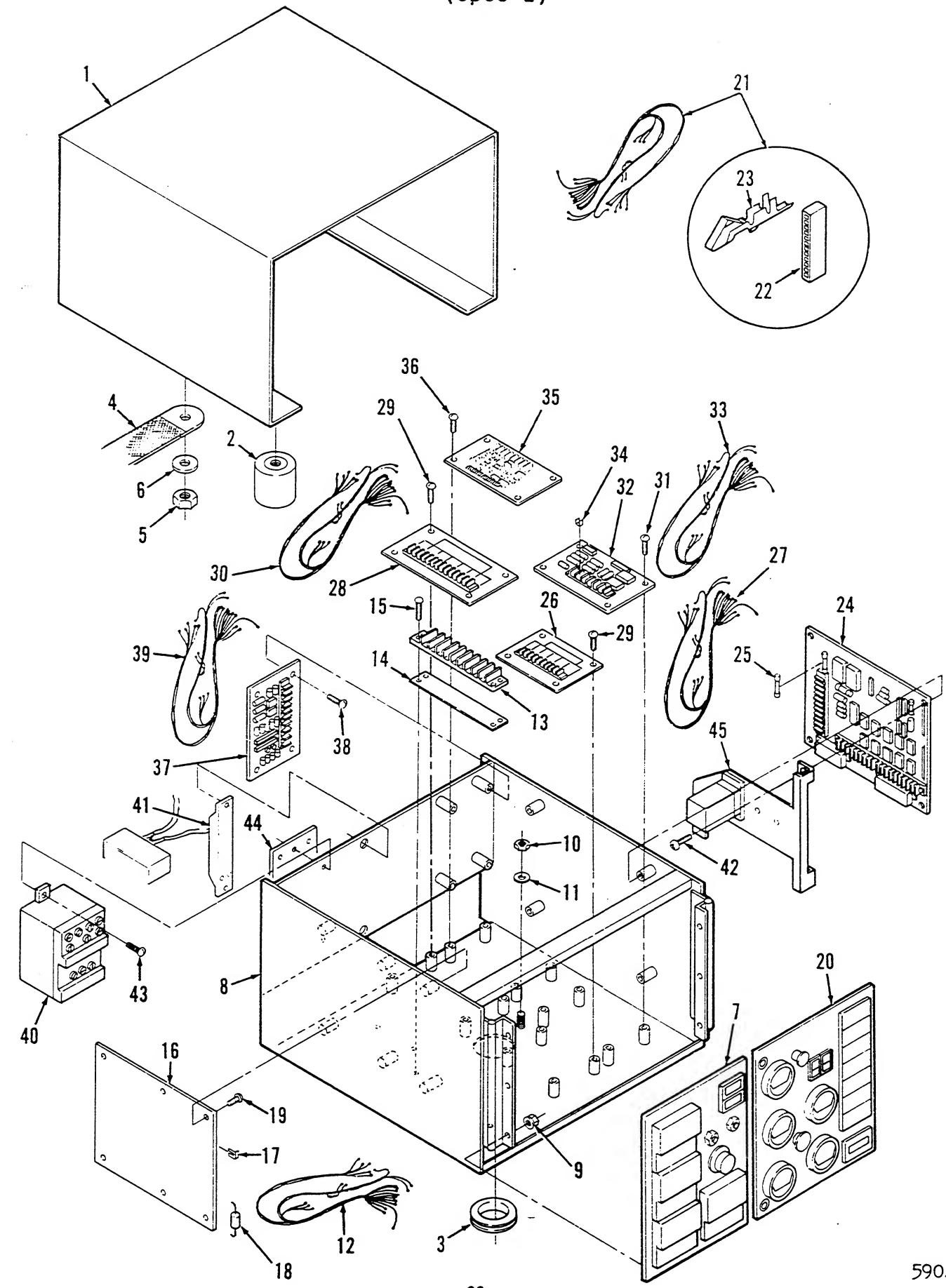
Control
(Spec C and D)



Control
(Spec C and D)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Regulator Assembly, Voltage (See Separate Page for Components) Standard (VRA21)	18	338-1427	1	Harness, Wiring - Remote Control (30')
	305-0693-01	1	Fixed Resistor	19	815-0105	1	Screw, Machine - Round Head (Brass) (#10-32 x 1")
	305-0693-02	1	External Adjust	20	526-0063	2	Grounding Stud
			Switching Regulator (VRA21)	21	856-0003	2	Washer, Flat - Brass (#10)
	305-0695-01	1	Fixed Resistor	22	851-0001	1	Washer, Lock - EIT (#10)
	305-0695-02	1	External Adjust	23	871-0010	2	Washer, Lock - Spring (Brass) (#10)
2	305-0737	1	Standard (VRAS-2)	24	821-0005	5	Nut, Hex - Brass (#10-32)
	301-3244	1	Bracket, Mounting - Relay				Screw, Self-Locking - Hex
	301-7334	1	One Socket Hole	25	301-5150	1	Washer Head (#10-32 x 1/2")
3	307-1061	1	Two Socket Holes	26	301-6230	1	Cover, Control
4	307-1157	3	Relay - Start (K11)	27	-	1	Box, Control
5			Spring, Holddown - Relay	28			Panel, Control (See Separate Page for Components)
			Monitor Assembly, Engine (Includes Replaceable Relay and Spring) (A11)	323-1137		1	Receptacle - Square Flange
	300-2510	1	Two Light Monitoring System (Standard)	323-1135		1	14 Pin (J2)
	300-2453-04	1	Nine Light Monitoring System	29	323-1229	11	16 Pin (J1)
6	307-1157	1	Spring, Holddown - Relay	30			Socket, Female - Used With 14 Pin Receptacle
7	307-1687	1	Relay (A11K1)	323-1193		4	Pin, Male - Used With 16 Pin Receptacle
8	812-0061	2	Screw, Machine - Round Head (#6-32 x 3/8")	323-1194		12	16-12 Gauge Wire
9	854-0006	2	Washer, Lock - IT (#6)	31			18-14 Gauge Wire
10	860-0006	2	Nut, Hex (#6-32)	323-1136		1	Plug - Circular
11	307-1061	1	Relay - Voltage Selector (K21)	323-1134		1	14 Pin (P2)
12	307-1058	1	Relay - Run (K12)	32			16 Pin (P1)
13	323-0804	1	Socket, Relay (K12)	323-1192		4	Socket, Female - Used With 16 Pin Plug
14	337-0049	1	Strap, Ground	323-1195		12	14-12 Gauge Wire
15	856-0008	2	Washer, Lock - EIT (5/16")	33	323-1194	11	18-14 Gauge Wire
16	508-0144	1	Grommet, Rubber (1" Hole)				Pin, Male - Used With 14 Pin Plug
17			Relay - Time Delay (Stop) (K15)				
	307-1151	1	1 Second to 5 Minutes				
	307-1194	1	3 to 30 Minutes				
	307-1189	1	6 to 60 Minutes				

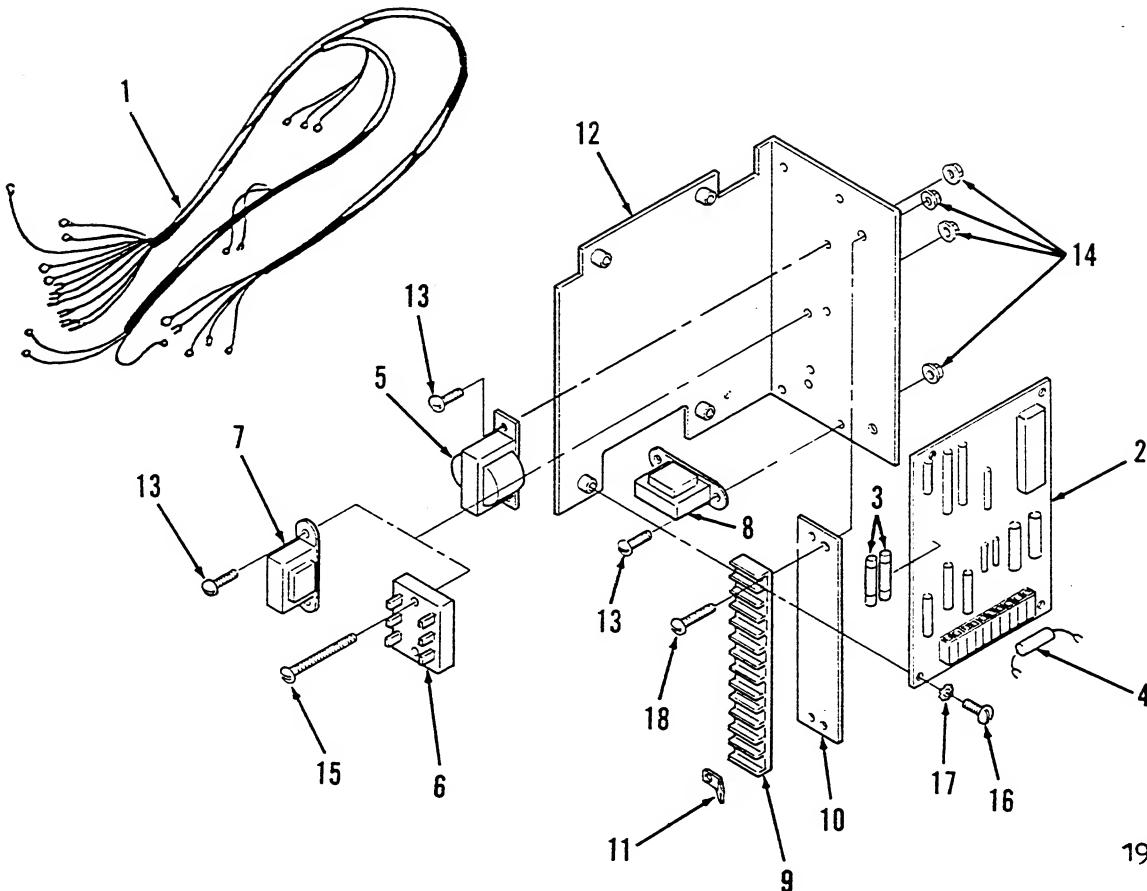
Control
(Spec E)



Control
(Spec E)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	319-0413	1	Cover, Control	27	338-1906	1	Harness, Wiring - Alarm Relay
2	402-0527	4	Isolator, Vibration				(7 and 12 Light Controls)
3	508-0051	1	Grommet (2" Hole)				(A13 to A11TB2)
4	337-0049	1	Strap, Ground	28			Board, Printed Circuit -
5	862-0015	1	Nut, Hex (5/16-18)				Alarm Relay (7 and 12 Light
6	856-0008	1	Washer, Lock - EIT (5/16")				Control) (A13)
7	-		Door Assembly, Control - AC	300-2862		1	12 VDC
			(Left Hand Side Facing	300-2863		1	24 VDC
			Control Doors) (See Separate	29			Screw, Machine - Round Head
			Page for Components)				(#6-32 x 1/2")
8	319-0416	1	Tray, Control	812-0063		4	7 Light Control
9	870-0131	6	Nut, Hex - ET (#10-32)	812-0063		8	12 Light Control
10	871-0015	1	Nut, Hex (1/4-20) Grounding	30	338-1905	1	Harness, Wiring - Alarm Relay
			Stud				(12 Light Control)
11	853-0013	1	Washer, Lock - ET (1/4")				(A14 to A11TB2)
12	338-2331	1	Harness, Wiring - AC	31	815-0544	4	Screw, Machine - Round Head -
			(Includes Terminal Block)				Cross Recessed with IT
			(AC Door Assembly to TB21				(#6-32 x 1/2")
			Terminal Block)	32			Board, Printed Circuit - Time
13	332-0607	1	Block, Terminal - 12 Place				Delay - Start/Stop/Preheat
			(TB21)				(A15)
14	332-2723	1	Strip, Marker				Without Preheat
15	812-0065	2	Screw, Machine - Round Head	300-2897		1	12 VDC
			(#6-32 x 5/8")	300-2899		1	24 VDC
16	300-2880	1	Board, Voltage Regulator	300-2898		1	With Preheat
			(Includes Jumper) (VR21)				12 VDC
17	332-2605	1	Jumper, Terminal (VR21TB1-3	300-2900		1	24 VDC
			to -4) (W1)	33	338-1904	1	Harness, Wiring - Time Delay
18	350-0394	1	Resistor (VR21TB1-7 to -8)				Start/Stop (A15 to A11TB1)
			(Controls Without Panel				Terminal, Tab (Double)
			Voltage Adjust)	34	332-2957	1	(A15TB1-7)
19	815-0544	6	Screw, Machine - Round Head -	35	-		Board, Printed Circuit -
			Cross Recessed With IT				Magnetic Pickup (A16) (See
			(#6-32 x 1/2")				Separate Page for Part
20	-		Door Assembly, Control - DC	36	812-0063	4	Number and Related
			(Right Hand Side Facing				Replacement Parts)
			Control Doors) (See Separate				Screw, Machine - Round Head
21	338-2330	1	Page for Components)				(#6-32 x 1/2")
			Harness, Wiring - DC	37			Board, Printed Circuit -
			(Includes Connector Housing				Over/Under Voltage Sensor
			and Contact Pins) (DC Door	300-2905		1	(A17)
22	323-1308	1	Assembly to Engine Monitor)	300-2906		1	12 VDC
			Housing, Connector - 12 Place	38	812-0063	4	24 VDC
			(J4)				Screw, Machine - Round Head
23	323-1302	12	Pin, Contact	39	338-1940	1	(#6-32 x 1/2")
24			Monitor, Engine (Includes				Harness, Wiring - Over/Under
			Fuses) (A11)				Voltage Sensor (A17 to A11)
	300-2809	1	7 Light Control	40	302-1833-01	1	Transducer, Watt (A21)
	300-2810	1	12 VDC	41	-		Heater, Control (See Separate
			24 VDC				Page for Components)
	300-2811	1	12 Light Control	42	815-0544	4	Screw, Machine - Round Head -
	300-2812	1	12 VDC				Cross Recessed with IT
			24 VDC				(#6-32 x 1/2")
25			Fuse	43	813-0102	2	Screw, Machine - Round Head
	321-0270	2	20 Amp (F1,F2)				(#10-32 x 5/8")
	321-0231	1	15 Amp (F3)	44	319-0030	1	Plate, Mounting - Transducer
	321-0094	2	5 Amp (F5)	45	-		Relay, Run (See Separate Page
26			Board, Printed Circuit -				for Components)
			Alarm Relay (12 Light				
			Control) (A14)				
	300-2855	1	12 VDC				
	300-2856	1	24 VDC				

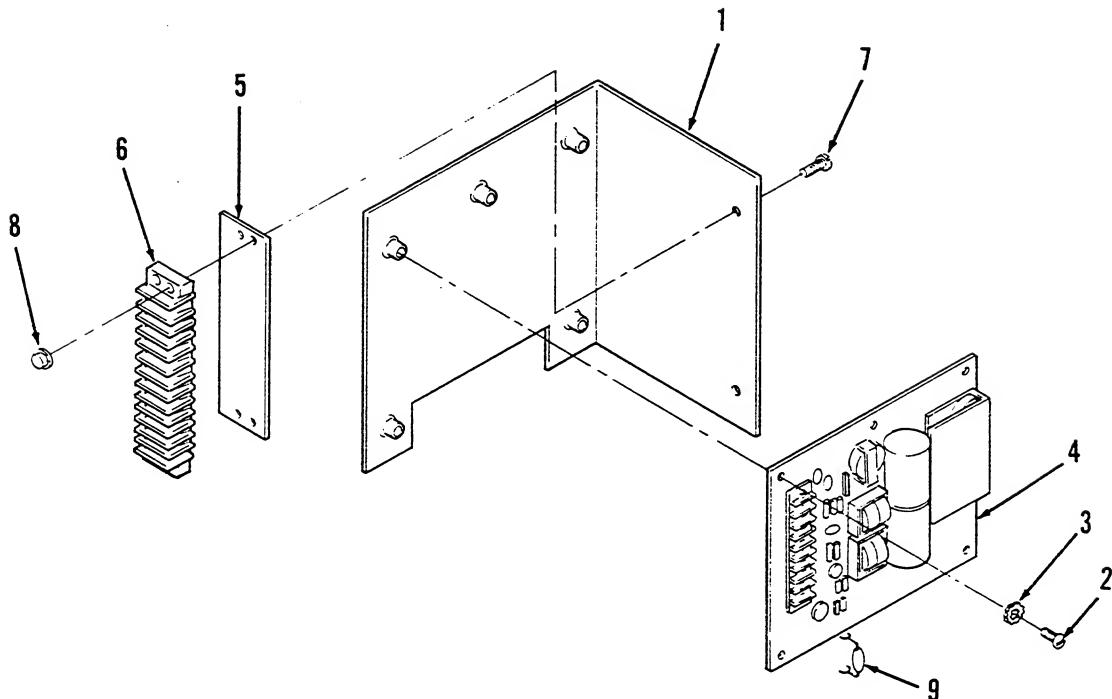
Voltage Regulator Assembly
(VRA21 - Spec C and D)



195A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Regulator Assembly, Voltage - Complete Standard	7	315-0343	1	Reactor - Used on Switching Voltage Regulator Assemblies (VRA21L22)
1	305-0693-01	1	Fixed Resistor	8	315-0343	1	Reactor (VRA21L21)
	305-0693-02	1	External Adjust	9	332-0607	1	Block, Terminal (VRA21TB2)
	305-0695-01	1	Switching Regulator	10	332-2373	1	Strip, Marker
	305-0695-02	1	Fixed Resistor	11	332-2387	4	Terminal, Tab - Used on Standard Voltage Regulator Assemblies
	338-1443	1	External Adjust				
2	338-1670	1	Harness, Wiring	12	301-5736	1	Panel, Mounting
	338-1443	1	Standard Regulator	13			Screw, Machine - Round Head (#6-32 x 3/8")
	338-1670	1	Switching Regulator	812-0061		4	Standard Voltage Regulator Assemblies
	332-2045	1	Board, Voltage Regulator (VR21)	812-0061		6	Switching Voltage Regulator Assemblies
	332-2045	1	Standard Regulator (Includes Fuses)	812-0061			
3	300-2409	1	Switching Regulator	14	870-0183	8	Nut, Self-Locking - Hex Head With ET Lockwasher (#6-32)
	321-0204	2	Fuse (1/4 Amp) Used With Standard Voltage Regulator Board (VR21F2,F3)	15	812-0070	2	Screw, Machine - Round Head (#6-32 x 1-1/4") Used on Standard Voltage Regulator Assemblies
4	350-1190	1	Resistor - Fixed (1740 Ohms, 1/2 Watt) Used on Voltage Regulator Assemblies Without External Adjust (VRA21R21)	16	812-0059	4	Screw, Machine - Round Head (#6-32 x 1/4")
5	315-0431	1	Transformer (VRA21T21)	17	853-0003	4	Washer, Lock - ET (#6)
6	305-0524	1	Bridge, Rectifier - Used on Standard Voltage Regulator Assemblies (VRA21CR21)	18	812-0065	2	Screw, Machine - Round Head (#6-32 x 5/8")

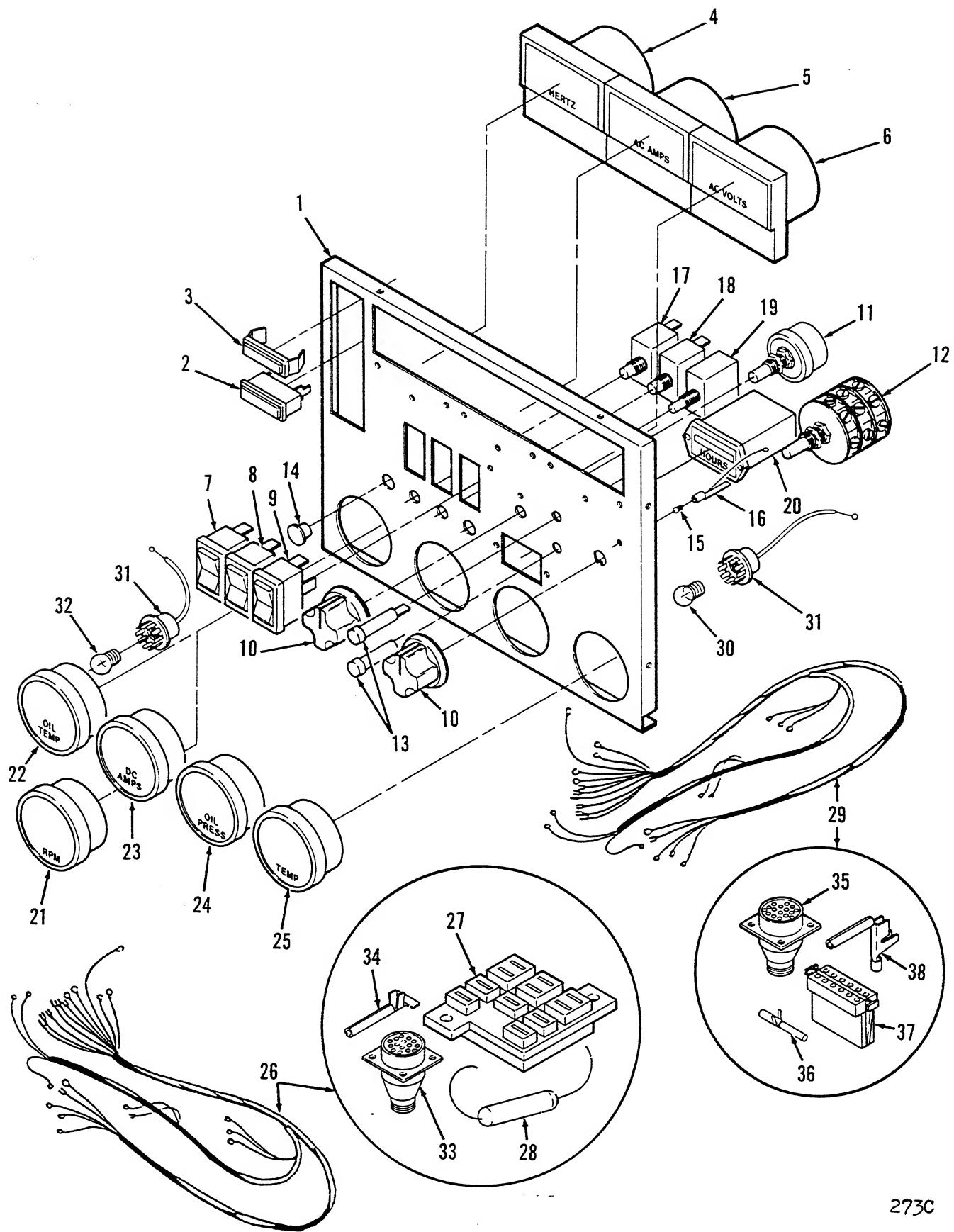
**Voltage Regulator Assembly
(VRAS-2 Spec C and D)**



194A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	305-0737	1	Regulator Assembly, Voltage - Complete	6	332-0607	1	Block, Terminal (VRAS-2TB2)
1	301-9334	1	Panel, Mounting	7	812-0065	2	Screw, Machine - Round Head (#6-32 x 5/8")
2	812-0059	5	Screw, Machine - Round Head (#6-32 x 1/4")	8	870-0183	2	Nut, Self-Locking - Hex Head With ET Lockwasher (#6-32)
3	853-0003	5	Washer, Lock - ET (#6)	9	350-0394	1	Resistor - Fixed (2000 Ohms, 1/2 Watt) Used on Voltage Regulator Assemblies Without External Adjust (VRAS-2R21)
4	300-2880	1	Board, Voltage Regulator (VR21)				
5	332-2373	1	Strip, Marker				

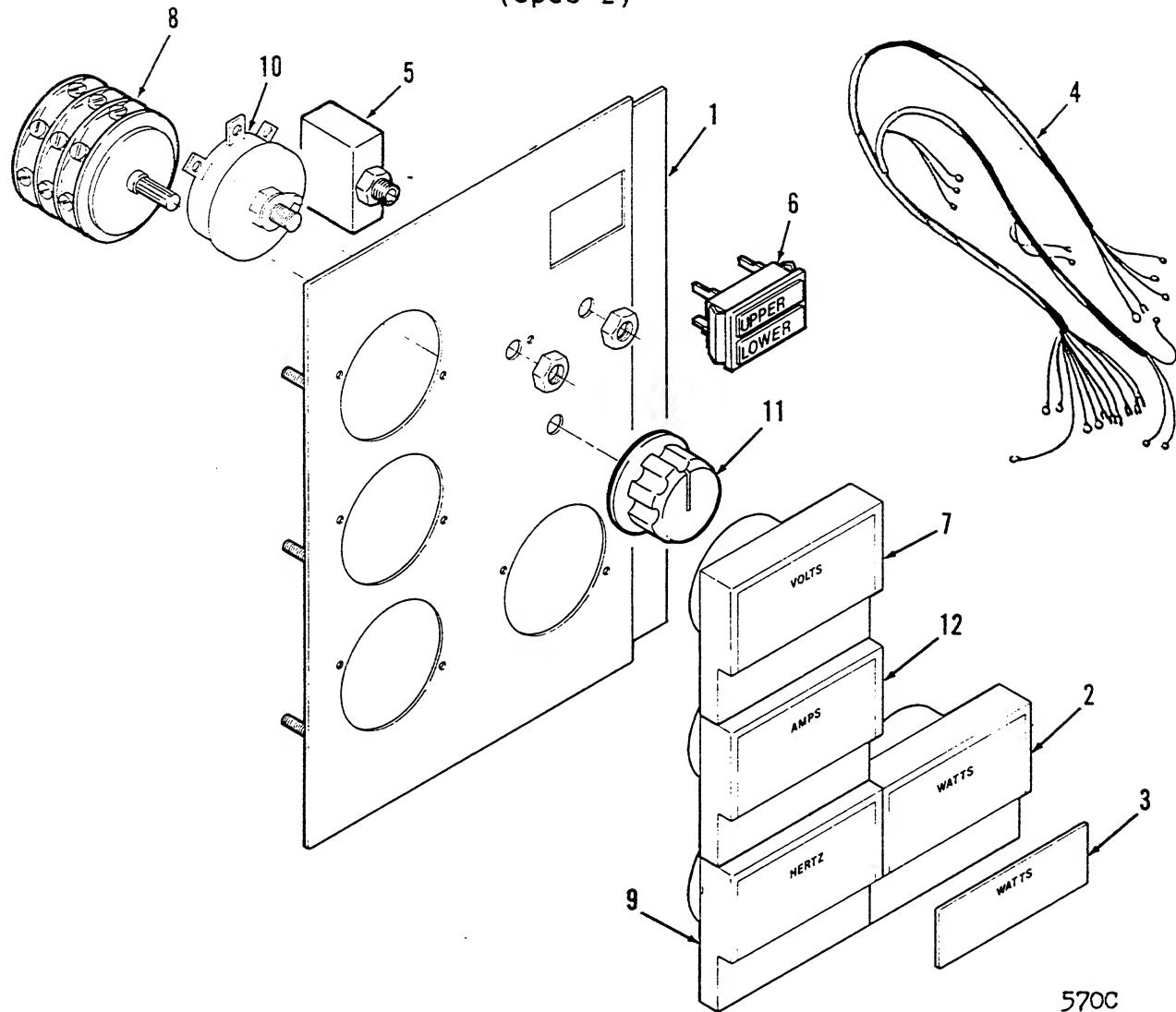
Control Panel
(Spec C and D)



Control Panel
(Spec C and D)

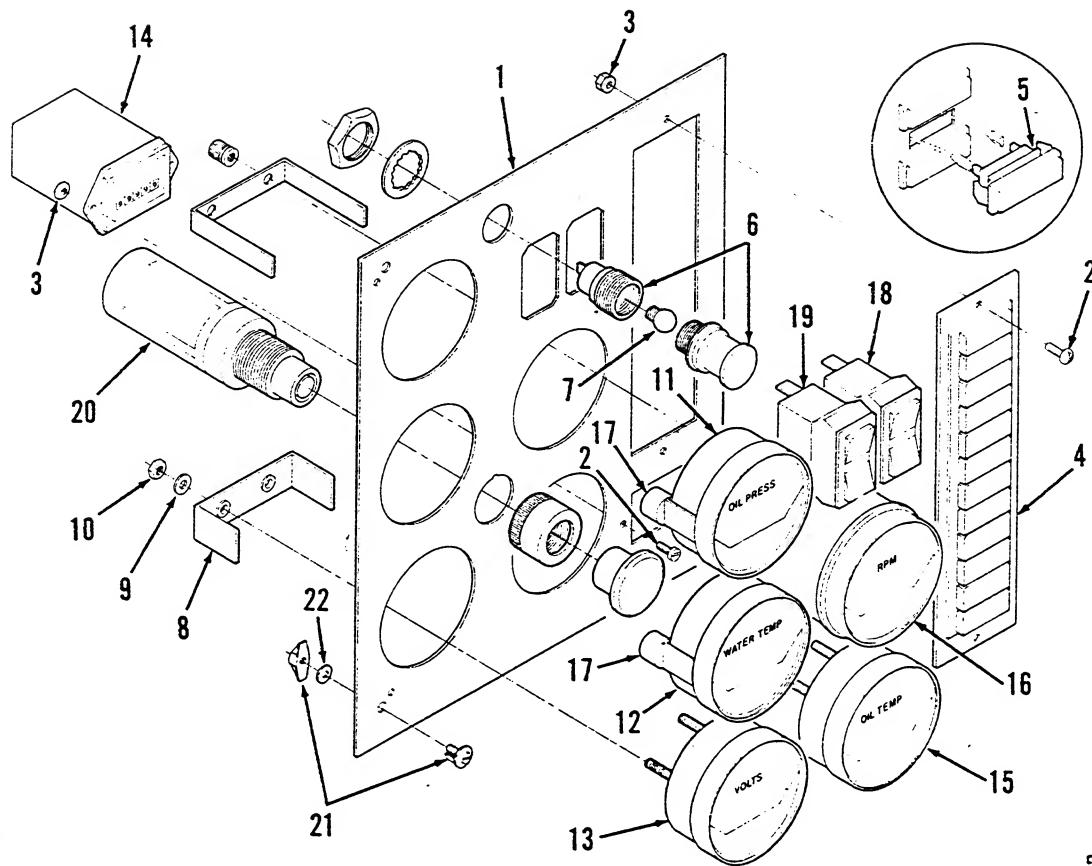
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Panel, Control Panels Without AC Meters Panels With Three Round Gauge Holes	19			Breaker, Circuit - Field Used With VRA21 Voltage Regulator Assembly 3 Amp (Dual - CB3,CB4)
	301-7348-01	1			320-1138	1	5 Amp (CB3)
	301-7348-02	1	Panels With Four Round Gauge Holes		320-0530	1	Used With VRAS-2 Voltage Regulator Assembly - 3 Amp (CB3)
	301-7349-01	1	Panels With AC Meters Panels With Three Round Gauge Holes	20	302-0885	1	Meter, Time Totalizing (M4)
	301-7349-02	1	Panels With Four Round Gauge Holes	21	302-1882	1	Tachometer (Includes Socket and Lamp (M5)
2			Light, Indicator (14VDC) Controls With Two Light Monitoring System	22	193-0330	1	Gauge, Oil Temperature (M5)
	322-0238	1	RUN - Green (DS1)	23	302-1402	1	Ammeter - DC (M1)
	322-0128	1	FAULT - Red (DS2)	24	193-0352	1	Gauge, Oil Pressure (M2)
			Controls With Nine Light Monitoring System	25	193-0351	1	Gauge, Water Temperature (M3)
	322-0238	1	RUN - Green (DS1)	26			Harness, Wiring - AC (Includes Socket for K11 Start Relay, Receptacle and Sockets)
	322-0110	1	LO ENG TEMP - Red (DS2)				Controls Without AC Meters
	322-0109	1	HI ENG TEMP - Red (DS3)				Controls With AC Meters
	322-0108	1	LO OIL PRES - Red (DS4)	338-1642-02	1		Single Phase Sets
	322-0111	1	OVERSPEED - Red (DS5)	338-1642-01	1		Three Phase Sets
	322-0107	1	OVER CRANK - Red (DS6)				All Except Voltage Code 9XR (Also Includes Resistor and Socket for K21 Voltage Selector Relay)
	322-0240	1	PRE HI ENG TEMP - Amber (DS7)				Voltage Code 9XR
	322-0241	1	PRE LO OIL PRESS - Amber (DS8)	338-1642-04	1		Socket, Relay (For K11,K21 Relays)
	322-0283	1	SWITCH OFF - Red (DS9)	27	323-0765	2	Resistor, Fixed - 47K Ohm, 1/2 Watt (K21R22)
3	322-0141	7	Lens, Indicator Light (No Legend or Lamp) Controls With Two Light Monitoring System	28	350-0556	1	Harness, Wiring - DC (Includes Receptacle, Pins, Plug and Sockets, where required)
4	302-1273	1	Meter, Frequency - AC (M21)	29			Meters
	302-1153	1	50 Hertz				Switches
			60 Hertz				Indicator Lights
5	302-1468	1	Ammeter - AC (M23)	338-1643-01	1		Controls With Two Light Monitoring System
			Single Phase Sets	338-1644	1		Controls With Nine Light Monitoring System
	302-1147	1	Three Phase Sets				
	302-1298	1	All Except Voltage Code 9XR	338-1646	1		
6	302-1148	1	Voltage Code 9XR	338-1645	1		
	302-1300	1	Voltmeter - AC (M22)				
			All Except Voltage Code 9XR	30	322-0308	3	Lamp, Pilot (DS10,DS11,DS12)
7	302-1148	1	Voltage Code 9XR	31	322-0210	4	Socket, Lamp
	302-1300	1	Switch, Push (Remote, Stop, Start) (S10)	32	322-0004	1	Lamp, Pilot (DS13)
	308-0531	1	Controls With Two Light Monitoring System	33	323-1137	1	Receptacle - Square Flange (14 Pin) (P2)
			Controls With Nine Light Monitoring System	34	323-1229	11	Socket, Female
	308-0620	1	Standard				Used With 338-1642-01 Wiring Harness
	308-0624	1	Pennsylvania State Approved	323-1229	7		Used With 338-1642-02 Wiring Harness
8	308-0533	1	Switch, Push - Pre Heat (S11)				Used With 338-1642-03 Wiring Harness
9	308-0532	1	Switch, Push - Lamp Test (S12)	323-1229	5		Used With 338-1642-04 Wiring Harness
10	303-0032	2	Knob				Used With 338-1642-04 Wiring Harness
11	303-0170	1	Potentiometer - 25 Watt (R23)	323-1229	10		Receptacle - Square Flange (16 Pin) (P1) Used With 338-1643-01 Wiring Harness
			Used With VRA21 Voltage Regulator Assembly With External Adjust	35	323-1135	1	Pin, Male - Used With 323-1137 Receptacle
	303-0261	1	Used With VRAS-2 Voltage Regulator Assembly With External Adjust	36			16-12 Gauge Wire
12	308-0284	1	Switch, Rotary -	323-1193	3		18-14 Gauge Wire
			Voltmeter/Ammeter (S21)	323-1194	10		
13	322-0323	2	Light, Pilot (DS21,DS22)	37	323-0984	3	Plug, Connector (12 Pin) (J1, J2, J3) Used With 338-1643-01, 338-1644 and 338-1645 Wiring Harnesses
	322-0211	2	Single Phase Sets				
			Three Phase Sets				
14	517-0132	1	Plug, Hole				Socket, Male (Side Feed)
15	322-0203	2	Lamp (DS14,DS15)	38	323-0488	8	Used With 338-1643-01 Wiring Harness
16	322-0213	2	Lampholder				Used With 338-1644 Wiring Harness
17	320-1110	1	Breaker, Circuit - Remote - 7 Amp (CB1)	323-0488	12		Used With 338-1644 Wiring Harness
18	320-1110	1	Breaker, Circuit - Control - 7 Amp (CB2)	323-0488	10		Used with 338-1645 Wiring Harness

AC Control Door Assembly
(Spec E)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	319-0417	1	Door, Control - AC Without Meters	10	303-0261	1	Potentiometer (R21)
	319-0418	1	Without Wattmeter	11	303-0032	1	Knob, Rotary Switch
	319-0419	1	With Wattmeter	12	302-1473	1	Ammeter (M22)
2	302-1722	1	Wattmeter (Dial Not Included) (M24)	302-1147	302-1683	1	0-50/100
	302-1721-01	1	Dial, Wattmeter	302-1684	302-1685	1	0-75/150
	338-1936	1	Harness, Wiring - Watts Transducer (A21 to M24 and TB21)	302-1724	302-1725	1	0-100/200
	320-1121	1	Breaker, Circuit (CB21)	302-1726	302-1727	1	0-150/300
6	322-0363	1	Light, Indicator - Upper/ Lower Scale (DS21, DS22)	302-1728	302-1729	1	0-200/400
7	302-1148	1	Voltmeter (M21) 0-300/600	302-1798	302-1799	1	0-250/500
	302-1753	1	0-750	302-1800		1	0-375/750
8	308-0882	1	Switch, Rotary - Voltmeter/ Ammeter (Knob Not Included) (S21)				0-400/800
9	302-1720	1	Meter, Frequency (Includes Resistor - Part Number Not Available at Time of Printing) (M23)				0-500/1000
							0-600/1200
							0-750/1500
							0-1000/2000
							0-1500/3000
							0-2000/4000

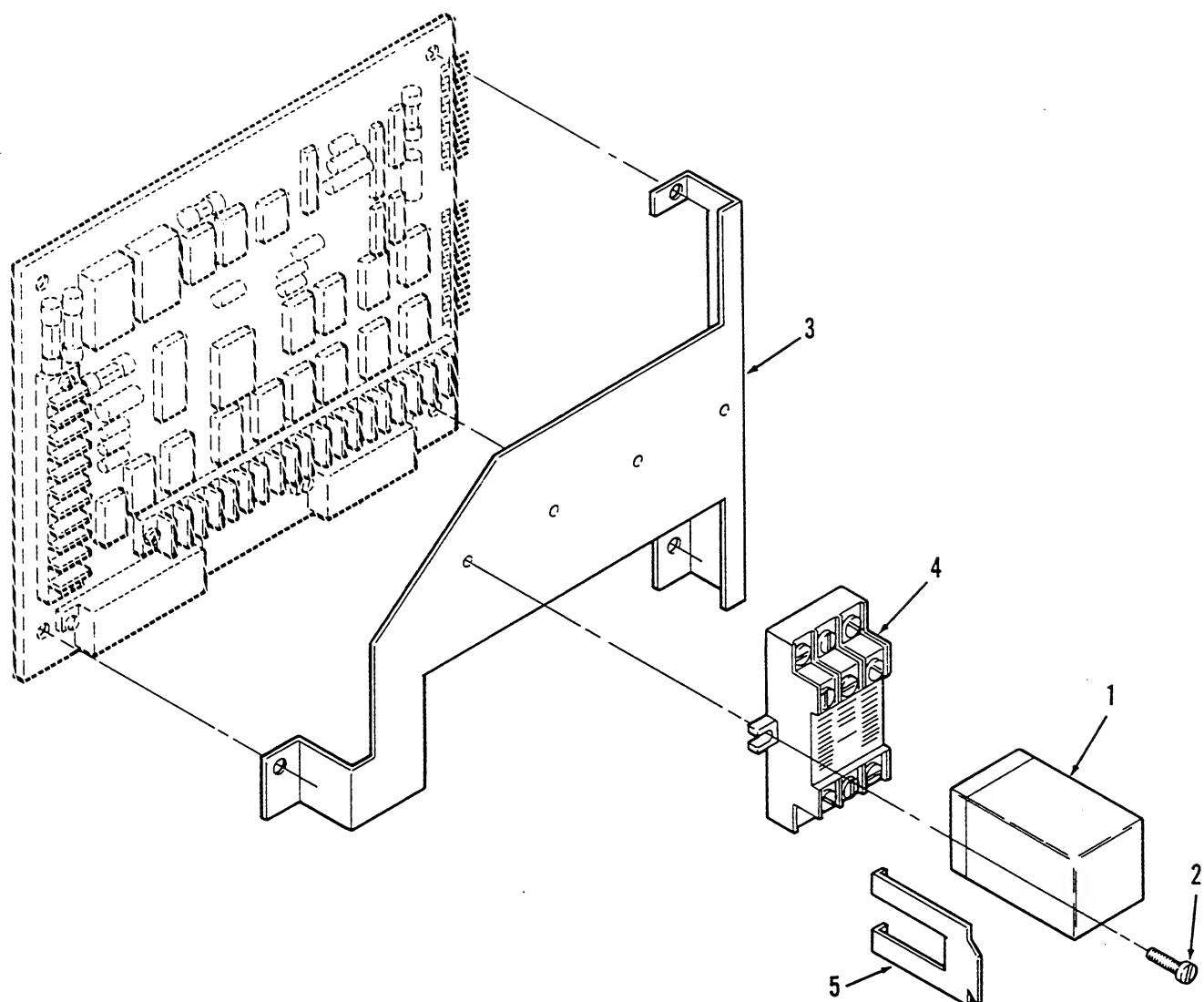
**DC Control Door Assembly
(Spec E)**



571C

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	319-0421	1	Door, Control - DC Doors with Three Round Gauge Holes	11	193-0352	1	Gauge, Oil Pressure (M11)
	319-0420	1	Doors with Five Round Gauge Holes	12	193-0351	1	Gauge, Water Temperature (M12)
2	815-0385	4	Screw, Machine - Round Head (#6-32 x 1/2")	13	302-1641	1	Voltmeter (M13)
3	870-0183	4	Nut, Hex - With ET (#6-32)	14	302-1642	1	12 VDC
4			Light Assembly, Indicator (Includes Wiring Harness and Connector Housing) (A12)	15	302-0885	1	24 VDC
			Seven Light Assembly	16	193-0330	1	Meter, Time Totalizing (M14)
	322-0359-01	1	12 VDC				Gauge, Oil Temperature (Includes Mounting Clamp)
	322-0359-02	1	24 VDC				Tachometer (Part numbers for bulb and mounting hardware were not available at time of printing) (M16)
			Twelve Light Assembly	302-1873-01		1	12 VDC
	322-0360-01	1	12 VDC	302-1873-02		1	24 VDC
	322-0360-02	1	24 VDC	17	193-0250	2	Resistor, Gauge (Used on 24 VDC Applications)
5			Light, Indicator - Replacement	18	308-0892	1	(R12,R13)
	322-0369-01	1	12 VDC	19	308-0784	1	Switch, Rocker - Restart/ Preheat/Panel Light (S11)
	322-0369-02	1	24 VDC	20	308-0853	1	Switch, Rocker - Run/Stop/ Remote (S12)
6	322-0361	1	Light, Panel (DS11)				Switch, Pushbutton -
7			Bulb, Panel Light - Replacement				Emergency Stop (Part Number for Bulb Not Available at Time of Printing) (S14)
	322-0004	1	12 VDC	21	406-0661	2	Switch, Pushbutton -
	322-0017	1	24 VDC	22	526-0367	2	Emergency Stop (Part Number for Bulb Not Available at Time of Printing) (S14)
8	302-0270	3	Clamp, Mounting				Latch, Panel
9	526-0049	9	Washer, Flat (#10)				Washer, Flat
10	871-0010	18	Nut, Hex - Brass (#10-32)				

Run Relay
(Spec E)



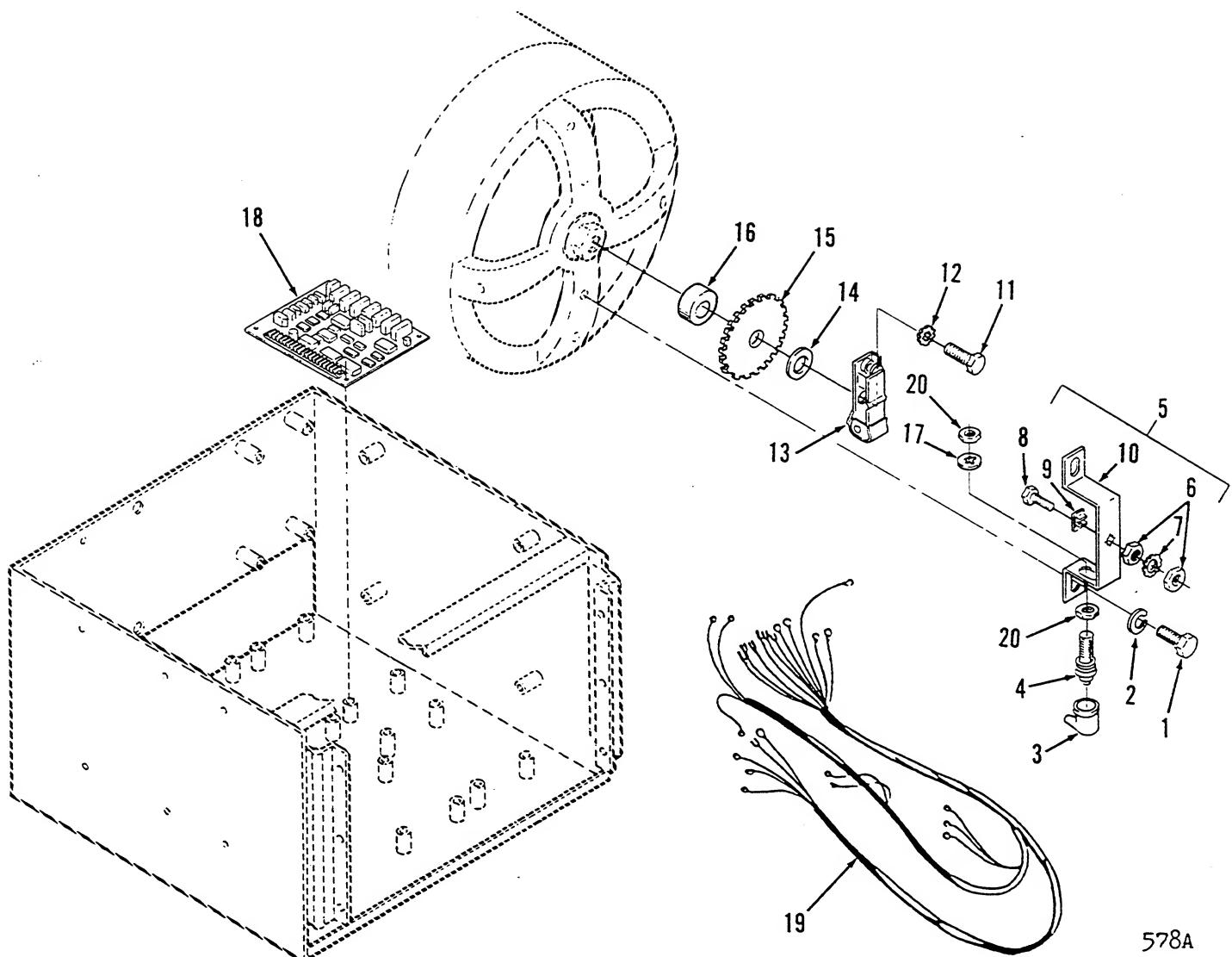
577B

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Relay, Run (K11) (Quantity as Required)
307-1058		1	12 VDC
307-1056		1	24 VDC
2	815-0388	2	*Screw, Pan Head - Cross Recessed Thread (#6-32 x 1/2")

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
3	319-0447	1	Bracket, Relay Mounting
4	323-0804	1	*Socket, Relay
5	307-1987	2	*Holdown, Relay

* - Quantities listed are for one mounted relay.

**Magnetic Pickup
(Spec E)**



578A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0003	2	Screw, Cap - Hex Head (1/4-20 x 1/2")	14	526-0077	1	Washer, Flat (3/8")
2	850-0040	2	Washer, Lock - Spring (1/4")	15	150-1557	1	Wheel, Sensor
3	150-1410	1	Cap, Insulator	16	370-4011	1	Spacer
4	150-1406	1	Sensor, Speed - Magnetic	17	854-0031	1	Washer, Lock - IT (3/4")
5	150-2117	1	Bracket and Point Assembly (Includes Parts Marked *)	18			Board, Printed Circuit - Magnetic Pickup (A16)
6	862-0001	2	*Nut, Hex (1/4-20)	300-2901		1	12 VDC
7	853-0013	1	*Washer, Lock - ET (1/4")	300-2903		1	24 VDC
8	150-0723	1	*Point, Contact	19	338-1930	1	Harness, Wiring - Magnetic Pickup (A16 to A11)
9	870-0250	1	*Nut, Insulator	20	868-0011	2	Nut, Hex - Jam (3/4-16)
10	301-9402	1	*Bracket, Mounting				
11	800-0053	1	Screw, Cap - Hex Head (3/8-16 x 1-3/4")				
12	856-0010	1	Washer, Lock - EIT (3/8")				
13	150-0717	1	Switch, Overspeed (S3)				

* - Parts Included in 150-2117 Bracket and Point Assembly

Paint, Thread Sealant and Gasket Kits

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
525-0305	-		Paint, Green - Enamel (13 oz. Pressurized Spray Can)
518-0452	-		Sealant, Thread (50 cc Bottle)
168-0173	1		Kit, Gasket - Lower End
168-0160	1		Kit, Gasket - Valve Grind

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101-0600	7	110-2979	9	115-0346	23	140-1791	26
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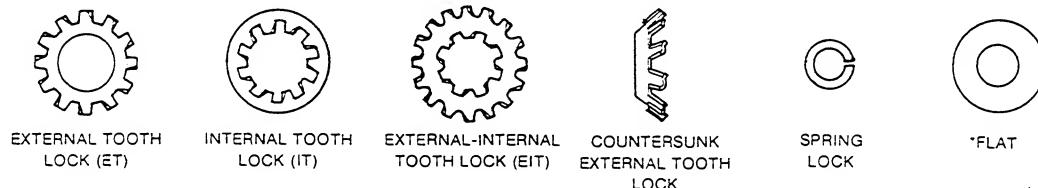
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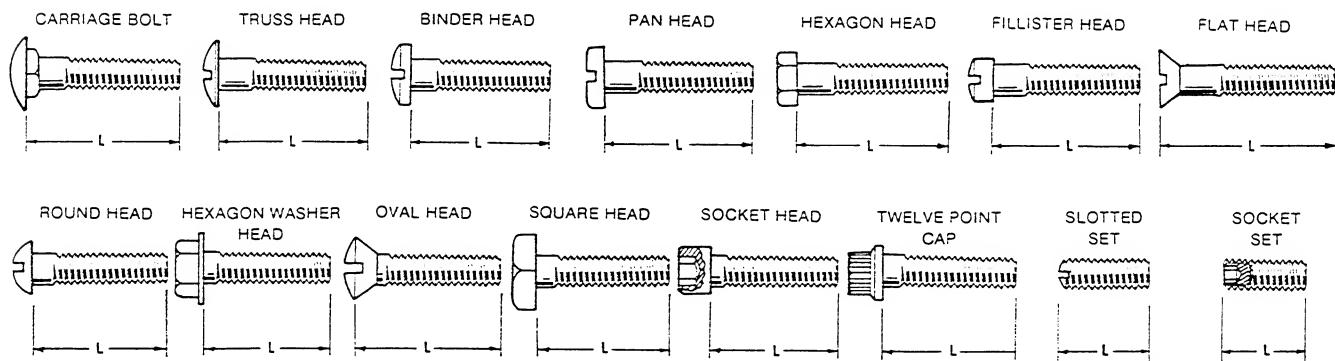
Illustrated hardware items are only for identification purposes. All hardware items listed throughout this parts catalog are steel SAE grade five (5) or lower (zinc plated with clear chromate dip) unless parts description indicates differently. All dimensions are in inches.

WASHER TYPES



* - Flat washer dimensions given are: Inside Diameter (ID), Outside Diameter (OD) and Thickness (Thk).

BOLT AND SCREW TYPES



L - Measure length between these points.

INTERNAL DRIVE TYPES



1/4-20 x 3/4"

Nominal size (fractional diameter or screw number)

Number of threads per inch

Length in inches

NUT TYPES





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